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Uncle Sam Is the Real Competitor - - p. 40

August 10, 1959

RAILWAY AGE *weekly*

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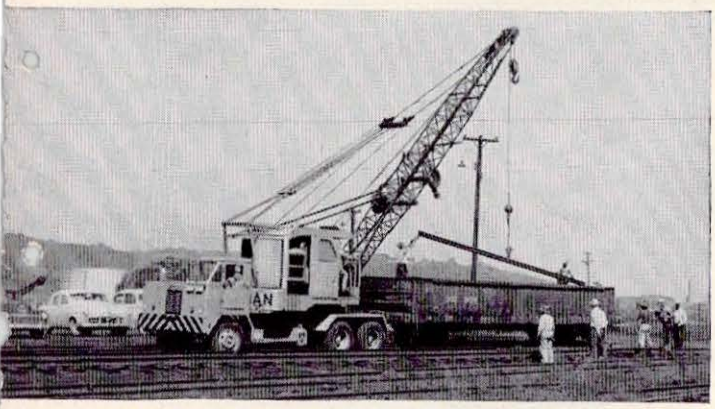
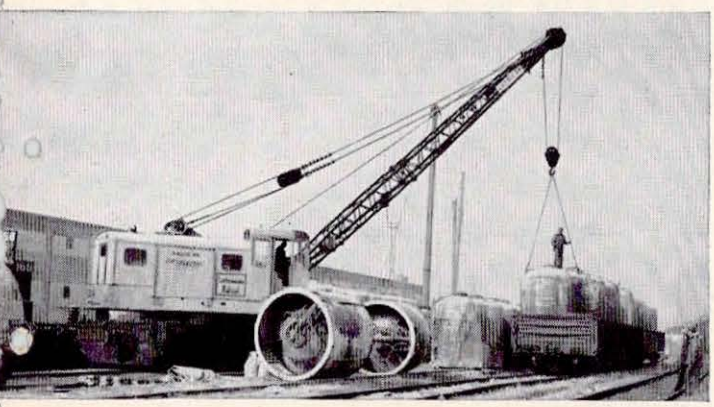
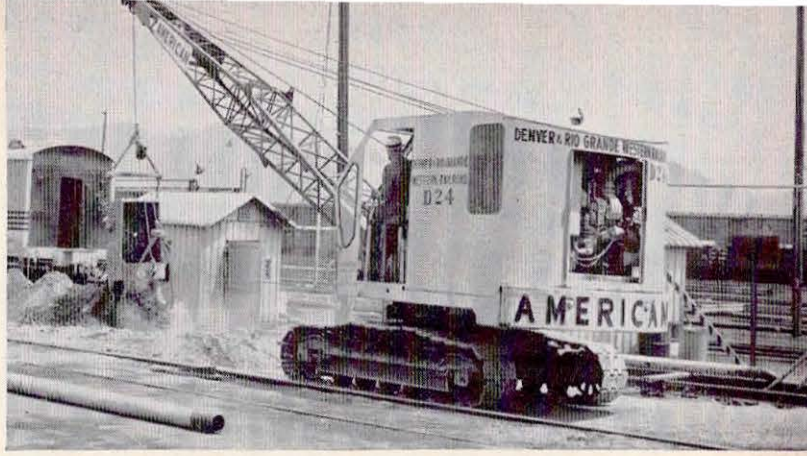
MAGNET: Scrap work. AMERICAN DiesELectric Locomotive Crane.



LOADING: Rail handling. AMERICAN 300 Series Truck Crane.



SPOTTING: Cars and materials. AMERICAN DiesELectric Locomotive Crane.



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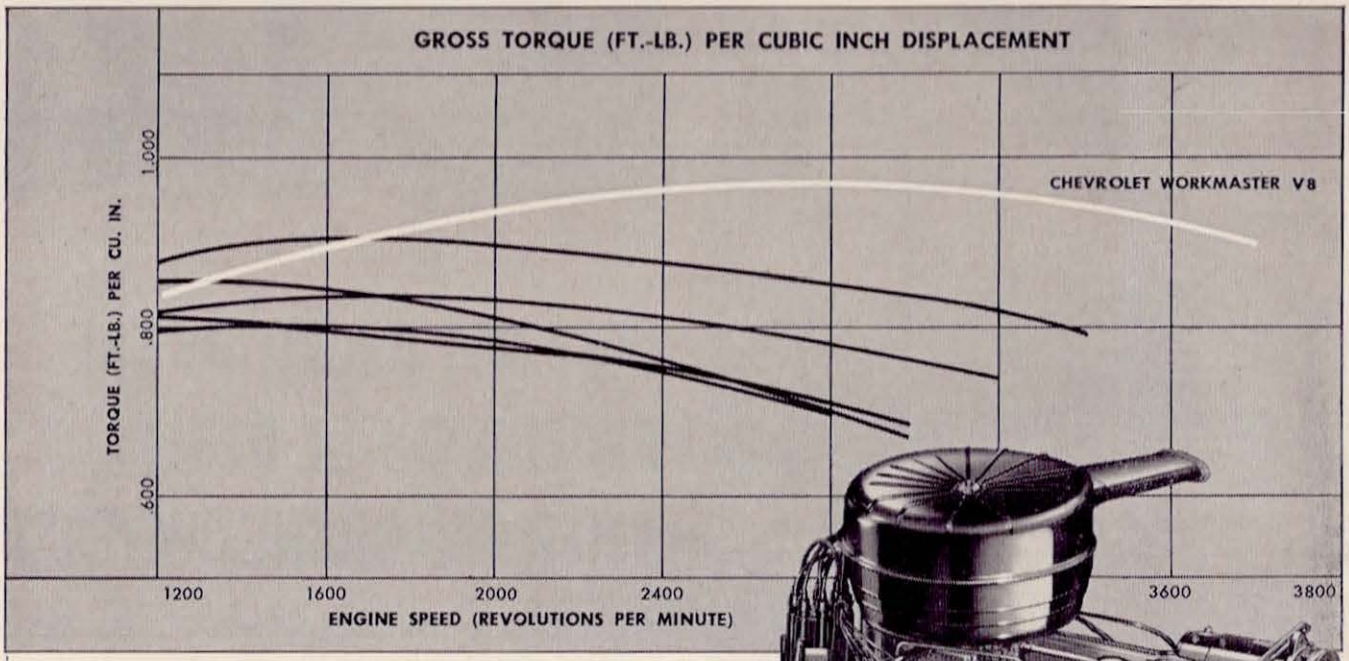
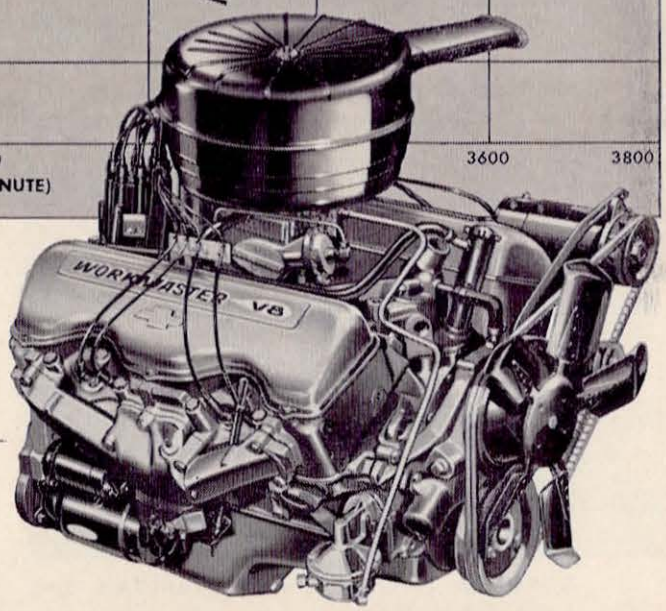


Proof that the Workmaster V8 puts out plenty of torque. The white curve above shows that the Workmaster provides high torque throughout the *entire range* of operating speeds. The black curves accurately represent the torque output of typical heavy-duty 6-cylinder engines of between 330 and 390 cubic inches of displacement. Curves demonstrate actual torque efficiency, based on gross ft.-lbs. of torque per cubic inch of displacement.



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RAILWAY AGE *weekly* August 10, 1959 • Vol. 147, No. 6

Week at a Glance

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RRs state mobilization needs ..... p. 9

Leading industry spokesmen have told Congress that the nation "is nearing the crisis point in transportation, so far as mobilization is concerned." The railroads will throw "superhuman effort" into any national emergency—but they need the help of broad legislative reforms.

Cover Story—Grade crossings are safer p.12

Highway crossing protection equipment pays a high return on investment. And public authorities are showing greater willingness to cooperate with railroads in installing it, even in paying for it. Those are two big reasons why the crossing death rate has dropped sharply in the past 10 years, despite the increase in motor vehicle use.

Mexico City gets a new terminal p.15

Estacion Buenavista, built at a cost of nearly $5,000,000, now handles 44 daily trains on the National and Mexican Railways.

Cover Story—Better materials handling can be the key to substantial savings p.16

Railroads are becoming increasingly aware that they can effect substantial economies by keeping abreast of—and applying—the many rapid advances in the science of materials handling.

Jet test track is all welded p.19

To test jet-powered rocket sleds and other vehicles at supersonic speeds, the Air Force Test Center has completed a 20,000-ft track, made of all-welded, 171-lb rail.

Machine cuts copying costs p.20

A Bruning Copyflex is saving time, increasing efficiency, reducing chances of error, in the stores department of the Milwaukee's Milwaukee shops.

PRR program improves motors p.21

"Integrated insulation" and redesign of components are cutting costs and improving performance on the Pennsylvania's diesel and electric locomotives.

RRs lose rate-freedom round p.26

The ICC has ruled that evidence of the effect on competing carriers is still admissible in rate cases.

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Week at a Glance CONT.

Current Statistics

Operating revenue	
6 mos., 1959	$5,025,907,261
6 mos., 1958	4,535,151,475
Operating expenses	
6 mos., 1959	3,904,047,540
6 mos., 1958	3,725,796,480
Taxes	
6 mos., 1959	546,801,508
6 mos., 1958	427,791,374
Net railway operating income	
6 mos., 1959	414,074,292
6 mos., 1958	233,910,848
Net income, estimated	
6 mos., 1959	308,000,000
6 mos., 1958	127,000,000
Average price railroad stocks	
Aug. 4, 1959	112.55
Aug. 5, 1958	87.47
Carloadings revenue freight	
30 wks., '59	18,402,763
30 wks., '58	16,446,336
Freight Cars on order	
July 1, 1959	40,973
July 1, 1958	27,757
Freight cars delivered	
6 mos., 1959	18,272
6 mos., 1958	29,545

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Printed at the Wilson H. Lee Co., Orange, Conn.

CPR auto carriers versatile p.28

The road has 500 new box cars designed to haul new automobiles west and plywood, lumber or grain east. And a subsidiary—Smith Transport—has successfully tested a piggyback trailer that can haul autos one way, and come back with general freight.

The Action Page—Uncle Sam is the real competitor p.40

Today's government-owned transportation plant is entirely different from what it was 50 years ago. Cumulative expenditures of almost $150,000,000,000 have made government the real competitor of privately-owned railroads.

Short and Significant

A net income gain of $181 million . . .

is estimated for Class I railroads for this year's first six months. The estimated net is $308 million, compared with $127 million for the first half of 1958. The AAR statement also shows June's estimated net income up $24 million—to $73 million from June 1958's $49 million. Rate of return for the 12 months ended with June was 3.41%.

Flexi-Van highway equipment . . .

is going into service on another western railroad. Missouri Pacific will begin receiving the first of 20 40-ft vans and 22 bogies late this month. Through service with New York Central will begin as soon as tariffs are ready. MoPac does not expect to buy Flexi-Van flat cars.

BLF&E general chairmen will meet August 31 . . .

in Chicago. One major topic for discussion: possible demands for a 1959 rules movement.

Slow railroading for lumber . . .

will end Sept. 8. The ICC has ordered cancellation by that date of tariffs offering to hold cars loaded with lumber for 15 days free of demurrage at 19 points in western trunkline territory. The tariffs were published by seven roads to compete with a like service of Canadian roads and with circuitous routes in this country which afford slow service to shippers of lumber. The condemned tariffs became effective July 2 after having been suspended for seven months. The condemnation was based on the ICC's conclusions that they would encourage undue detention of cars, provide for service beyond that called for by line-haul rates, and open the door to like demands from shippers of other commodities.

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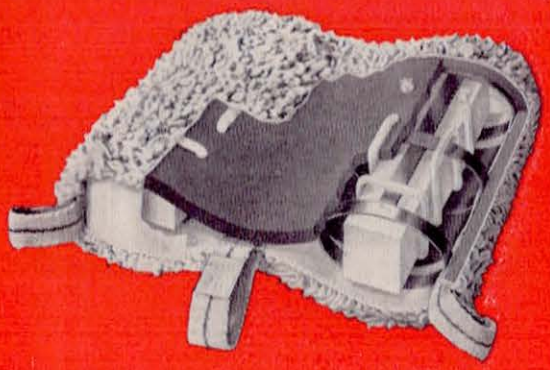

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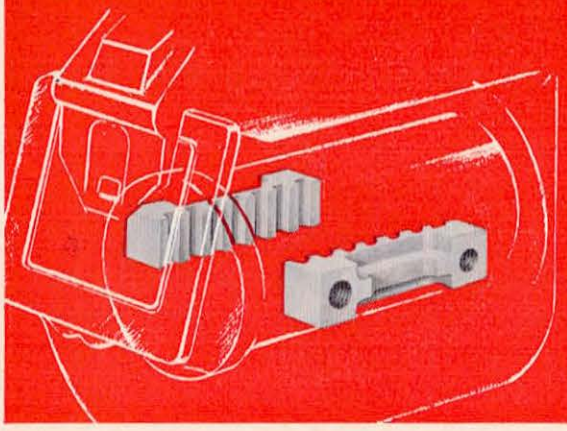

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RRs State Mobilization Needs

► **The Story at a Glance: The railroad industry's complete readiness for war awaits public transport policy changes which will enable the industry to build up greater strength and capacity.**

That's the gist of advice which industry spokesmen have given to the House Armed Services Subcommittee on Adequacy of Transportation in the Event of Mobilization. The railroad spokesmen were Presidents Daniel P. Loomis of the AAR, James M. Symes of the Pennsylvania, John M. Budd of the Great Northern and W. Thomas Rice of the Atlantic Coast Line.

They told the subcommittee that railroad service could mean the difference between victory and defeat, and that the country "is nearing the crisis point in transportation, so far as mobilization is concerned."

"War-readiness" policy changes recommended to Congress by leading railroad spokesmen would require enactment of a broad legislative program calling for:

- Income-tax relief to ease the financing of new equipment and facilities.
- More freedom to operate other forms of transport.
- Adequate user charges on publicly-provided transport facilities.
- Repeal of those provisions of the Interstate Commerce Act which leave for-hire trucking of agricultural products free from regulation.

AAR President Loomis called the railroad system "one of America's greatest national defense assets." He assured the subcommittee that the country can count on railroad men to deliver "superhuman effort" to keep the trains rolling in any new emergency.

He recalled that the railroads in World War II were relied upon for the transportation of over 90% of all military freight and over 97% of all organized military travel. At the peak of the war, in 1944, their freight volume was double the pre-war load and the passenger volume had multiplied four times, Mr. Loomis also pointed out.

"Though our great terminal centers are destroyed, as it is predicted some may be," he said, "we will recover as no other carrier can . . . . And when gasoline and rubber supplies diminish and other traffic grinds to a halt, railroads again will do their best to take up the slack."

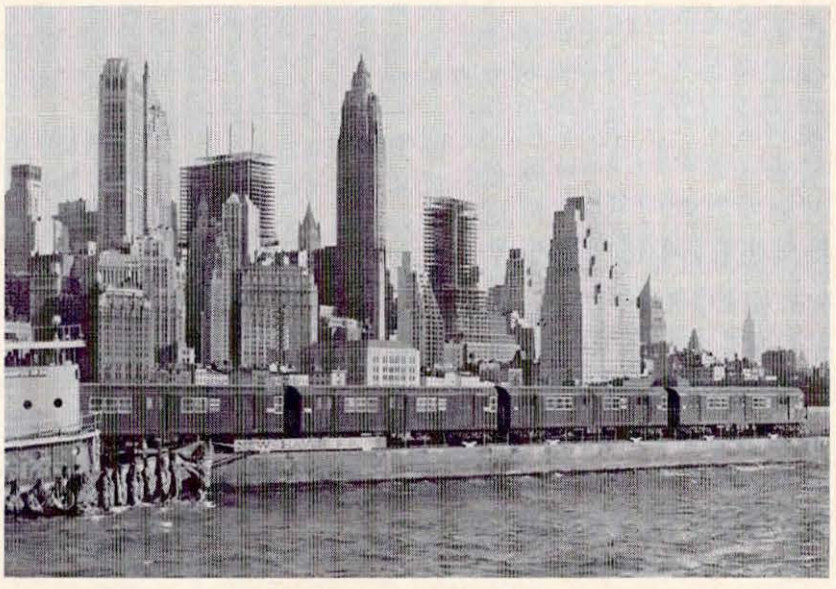
In the latter connection, Mr. Loomis had figures showing how service produced by highway carriers shrank during the war—to 58 billion ton-miles in 1944, compared with 81 billion ton-miles in 1941. In view of this he thought it "ironic" that the greater part of governmental expenditures for transport facilities (nearly $138 billion out of $150 billion) has gone for highways.

The railroads, in their recommendations, seek "neither favoritism, nor charity, nor handouts—nothing more than equal treatment from government and a fair chance to compete for business on the same terms as other carriers," the AAR president emphasized. Of the industry's legislative program, he had this to say:

"Not one of these recommendations is intended to confer, nor would any confer, any unfair advantage upon railroads in the competition for traffic with other forms of transportation. Not one asks anything for railroads that other forms of transportation do not already have or could be given in a new enactment. Not one would require an appropriation from Congress . . . . Rather, all these recommendations seek is to establish conditions of fair and equal opportunity in the field of transportation and to remove artificial handicaps and barriers that have thwarted, and continue to thwart, a basic industry in its effort to stay healthy and strong in the public interest."

Rejecting contentions that their defense role would be trimmed by new developments in weapon concepts, Mr. Loomis asserted that the railroads would prove more useful in future emergencies than in the past. This, he explained, is due to the railroads' inherent flexibility, mobility and recuperability, their know-how, and the modern equipment made possible by advanced technology and "vast private investment."

Yet, the AAR president warned, despite capital expenditures totaling $14



New Subway Cars Sail for Brooklyn

The first eight of 110 new cars costing a total of $11,726,000 ordered from ACF by the New York City Transit Authority make the crossing from Greenville, N. J., to Bay Ridge, Brooklyn, on New Haven barges. They were hauled from ACF's Berwick, Pa., plant to Greenville by diesel locomotive. ACF has delivered 950 New York subway cars, not including the present order, since World War II.

billion since World War II, the railroads do not have the reserve equipment that existed in 1940 to meet the swollen traffic demands war would bring. He identified the passenger-car situation as "most serious," because the passenger fleet has declined by one-third since 1944.

Noting Department of Defense statements to the effect that the fleet is adequate to meet military requirements, Mr. Loomis pointed out that this leaves unanswered "the grave question of where civilian travel diverted from highways and airways would go."

He also warned that "any deterioration of the freight car supply, whether as a result of enemy action or inability of the railroads to purchase enough new cars, would be disastrous." On this score, Mr. Loomis called it a "sobering fact" that "today not only is there no car surplus, but railroads are hard-pressed to meet peacetime demands."

As to the motive-power situation, the AAR president reported how it has been improved by the intensive dieselization program of the postwar years. At the same time he pointed out that many diesels are now nearing the age for retirement or rebuilding, and that any sudden increase in traffic, imposed by war conditions, would have to be accompanied by a substantial locomotive building program.

Thus, Mr. Loomis urged that the railroads be encouraged to build up capacity now while manpower and materials are available—"not when an emergency is upon us and our resources are critically needed in other vital areas of war work."

Much of the encouragement which is needed would come with enactment of the industry's legislative program, he added.

It was President Symes of the PRR who warned that the country "is nearing the crisis point in transportation, so far as preparation for mobilization is concerned." Unless something is done "quickly," he added, "the railroads will not be in shape to meet the

(Continued on page 35)

Watching Washington *with Walter Taft*

• **PIGGYBACKING** may be scrutinized by the Surface Transportation Subcommittee of the Senate's Interstate Commerce Committee. Senator Smathers of Florida, the subcommittee's chairman, planned to get the inquiry under way next week, but changed his mind —presumably because some of the matters involved are issues in cases pending before the ICC.

THE SENATOR on Aug. 3 released the text of a letter he had written to Chairman Tuggle of the ICC, inviting the Commission to be represented Aug. 18 at an informal meeting which would be attended also by representatives of carriers interested in piggybacking. Two days later the Senator withdrew the letter and cancelled plans for the meeting. The inquiry is expected to be revived after the pending cases have been decided by the ICC. The Senator's office said last week, however, that a final decision on revival had not yet been made.

IN THE WITHDRAWN LETTER, the Senator told ICC Chaiman Tuggle that piggybacking is a development which requires "close scrutiny." The letter also referred to reports alleging that "unless the new development is meshed properly into our present transportation system it could render futile efforts Congress has made to establish and maintain healthy and independent transportation agencies."

SOURCES of the reports were not identified. They served to recall, however, that the executive committee of American Trucking Associations recently made a somewhat vague announcement that it was launching a campaign against piggyback operations "which are actually motor carrier services requiring certificates of convenience and necessity." The announcement also said the ATA staff had been instructed to oppose rail piggybacking "designed to deprive independent motor carriers of business they have traditionally handled."

PLAN I piggybacking, which involves use of rail services by motor carriers, seems to be in the clear. Senator Smathers' letter said "there appears to be no problem where trailer-on-flat-car service is used simply as a substitute for authorized highway operations." The senator called this the "original concept" of piggyback.

THE OTHER PLANS generally involve service offered to shippers (including forwarders) in equipmen owned by the railroads or supplied by the shippers. Senator Smathers has heard it contended, "apparently with some justification," that some of these might bring invasion by one railroad of the territory of another, and encroachment by one motor carrier on the operation of another. He has heard like complaints about some piggybacking arrangements involving forwarders.

OTHER ALLEGATIONS are that some arrangements now in effect or being proposed will enable railroads, truckers and forwarders to perform indirectly services they are not otherwise authorized to perform. The senator says present operating authorities of regulated carriers would become worthless under such a set-up. He is also concerned about reports that some piggyback-service rates "are destructively low and violate the established principles of . . . rate-making."

RECENT ICC COMMENT on the development of piggybacking came from Chairman Tuggle. He tied the service in with containerization and identified standardization of equipment and pricing as the major problems to be solved. Solution of the former, he left to equipment manufacturers.

THE PRICING PROBLEM seems difficult to the ICC chairman, but he predicted that it will be solved. At the same time, he announced the Commission's intention "to see that the container is not used as a subterfuge or device for cut-throat competition."

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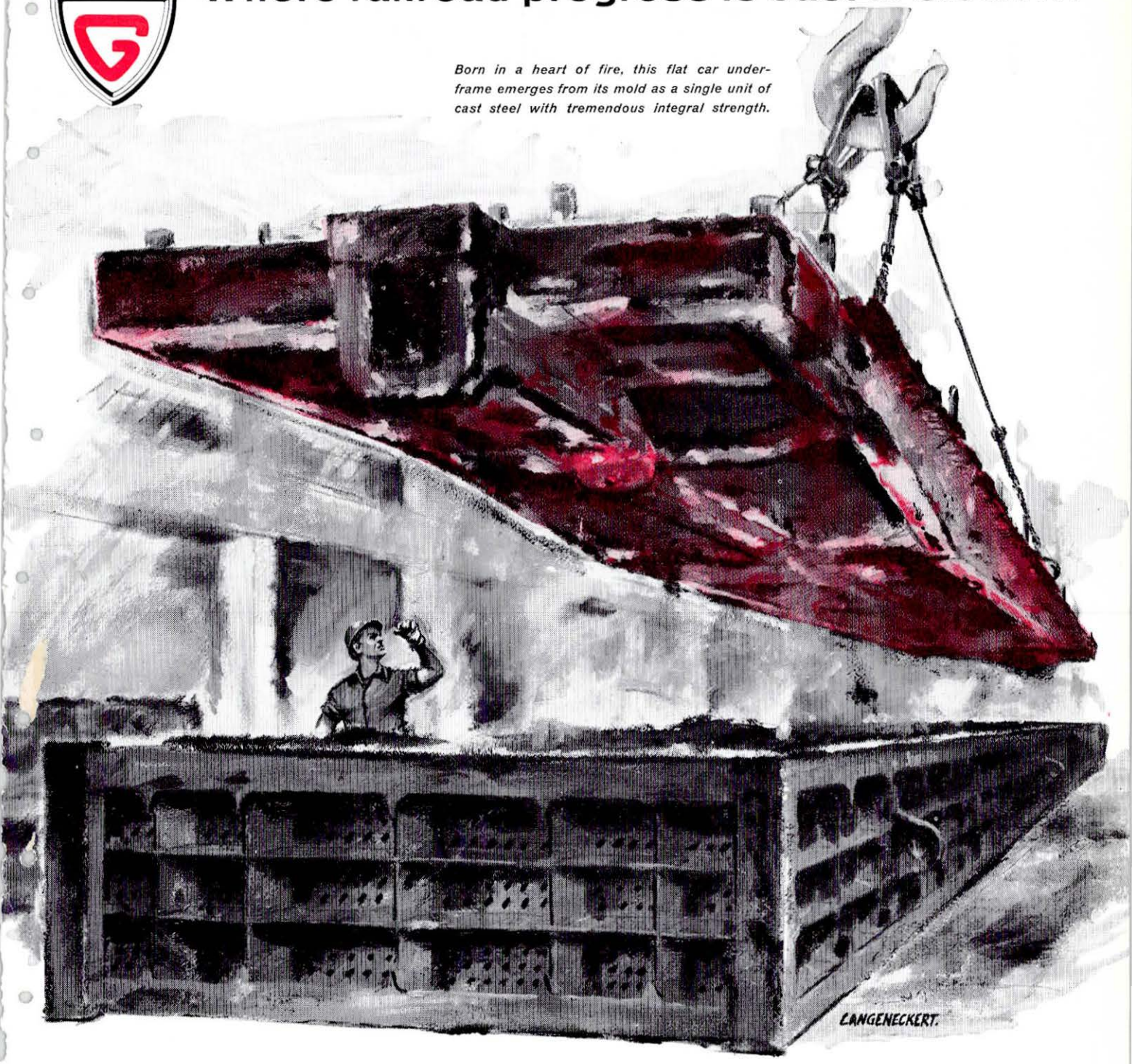

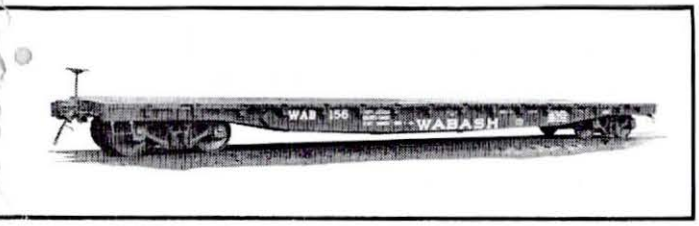

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Over half a century ago, General Steel began with a big idea that promised equally big benefits to railroads—the combining of many separate parts into a rugged one-piece steel casting.

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General Steel, together with railroads and other industries using Commonwealth Products, has become bigger and better through the years. Together they set the standard today for progress and service . . . through outstanding performance.

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10 YEARS OF HIGHWAY-RAILROAD GRADE CROSSING PROTECTION							
Year	Number of Railroads	Total Number of Crossings Equipped	Number of Crossings Equipped Flashing-Light Signals Only	Flashing-Light Signals with Automatic Gates	Source of Funds for Number of Crossings Equipped Railroad	Public	Joint
1958	81	1,380	961	419	423	147	810
1957	83	1,630	1,175	455	520	223	887
1956	88	1,320	984	336	526	105	689
1955	76	1,070	781	289	442	82	546
1954	80	1,364	985	379	686	64	614
1953	86	1,491	1,112	379	772	105	614
1952	94	1,435	986	449	792	81	562
1951	95	1,406	880	526	870	82	454
1950	91	1,573	1,047	526	966	195	412
1949	90	1,571	1,101	470	937	218	416

Why Grade Crossings Are Safer

Fatalities at all railroad-highway grade crossings dropped from 4.4 per day in 1948 to 3.7 per day in 1957. This was in the face of an increase in motor vehicles from 50 to 67 million. The number of crossings remained steady at about 226,000 through this period. During the past 10 years, over 14,000 of these crossings have been equipped with flashing-light signals or with flashing-light signals with automatic gates. In many cases, these have been partly paid for by states, cities and towns, which have contributed to greater crossing safety by their increased willingness to share in the cost of installing —and in some cases of maintaining—new and improved forms of protection.

In recent years there has been a definite trend toward greater and greater cooperation between railroads and local municipalities on the grade crossing protection problem. The main concern has been to make crossings safer, yet not unduly impede the flow of vehicular traffic. Another objective has been to replace watchmen with automatic protection equipment.

An example of such close railroad-city cooperation to provide improved protection is found on the Chicago & North Western, which recently completed a two-year program involving 330 grade crossings in eight states. Studies were made of each crossing to evaluate street traffic, train movements, switching operations, station stops and other circumstances. Sketches and photographs of the existing crossings were also used.

Based upon all this information, a project proposal was prepared for each crossing. Then a conference was held with the traffic engineer or the city council of the municipality in which the crossing was located. In such a conference, a resolution was prepared to authorize the mayor to sign a joint stipulation which was sent to the state commerce commission. If the commission approved, an order authorizing the project was issued.

If city authorities opposed the proposed improvement, the railroad appealed to the state commission to hold an official hearing. Then a decision and order was rendered by the commission.

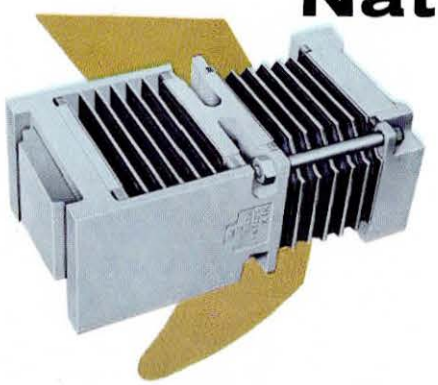
In most instances, the city authorities approved of the improved form of protection (e.g., gates to replace watchmen or wigwags) proposed by the railroad. Also, in most cases, they agreed that automatic control, which is on the job "round-the-clock," is better and more reliable than manual operation or manual control, which is usually on a part-time basis.

What were once busy streets may now have relatively light traffic. So now, most railroads work with city officials in making extensive studies of vehicular traffic flow. In some instances, cities have closed a street with light traffic, where parallel streets exist. This reduces the overall cost of a crossing protection project, and at some locations enables the railroad to install complete automatic controls with speed selection to differentiate between high- and low-speed trains.

Such a project was installed by the Gulf, Mobile & Ohio at Auburn, Ill. Gates with flashing-light signals were installed at three of seven parallel streets crossing the railroad, and barriers were erected across the other four streets at the tracks. The C&NW,

EQUIPMENT MODERNIZATION Key to Successful Railroading

National Rubber Draft Gears
on the Milwaukee Road



It is the 65,500 foot-pound cushioning capacity of National MF-400 Rubber Draft Gear in your *conventional* 24⅝ inch gear pocket that reduces center sill stress as much as 42%, thus giving greater protection to the car structure from damaging impacts.

Though newest of the transcontinental routes, history of the Chicago, Milwaukee, St. Paul & Pacific dates back over a century. Throughout this period, often called the Golden Century of Development, the Milwaukee has been a pacesetter in equipment modernization. Today, still abreast of the most modern trends, many of the Milwaukee Road's locomotives and cars are equipped with National Rubber Draft Gears for impact protection.

In fact, today there are more than 113,000 National Rubber Draft Gears in service on North American railroads—many with service records of over 10 years and hundreds of thousands of maintenance-free miles.

AA-9324

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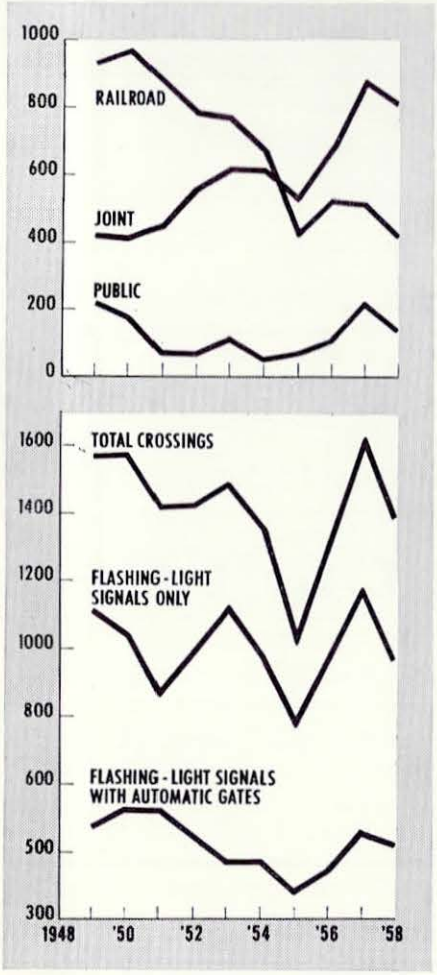
RAILWAY INDUSTRIES MEMBER

working with the city of Morrison, Ill., installed automatic gates with flashing-light signals, with complete automatic control and speed selection at five street crossings. Barriers were erected at four other crossings. At Centralia, Ill., the city allowed the Illinois Central to close 12 street crossings with barriers. In addition one grade separation with a highway underpass was constructed; gates and flashers were installed at four streets, and flashers only at six street crossings.

In some areas, street traffic as well as rail switching moves have been reduced and changed in nature. Manual gates, operated part time, have been in service for 60 years or more at some crossings in industrial areas. But modern flashing-light signals with automatic control in service round-the-clock provide better protection now. This was done at nine crossings in one area of Chicago, Ill.

Speed selection has made complete automatic control practical. An objection to automatic control in the past has been that, in some instances, e.g., during switching moves, gates are down and delay street traffic, when no train movement over the crossing is imminent. To overcome this objection, most railroads install selective speed control schemes, time-distance cutouts, restarts, etc. The C&NW, for example, improved protection at nine crossings in Wheaton, Ill. Speed selection controls utilize timing sections for speed ranges as follows: (1) above 65 mph, (2) 65-52 mph, (3) 52-37 mph, (4) below 37 mph. When station stops are involved, speed ranges also include 37-28 mph and 28-17.5 mph. In addition to these speed selection controls, push-buttons at the crossings enable switching crews to raise gates if they stop short of the crossing and are not in a timing section.

In some instances railroads have changed their schedules so switching by local freights is not done during periods of peak vehicular traffic. At Carroll, Iowa, where automatic gates had been in service for years, at three street crossings, one reason for supervisory manual control was to clear the gates for street traffic when through freights were stopped to set out or pick up cars. By establishing rules and fixed wayside signs designating points beyond which standing portions of trains must be left, the automatic controls were revised so no manual control was required.



SOURCES OF FUNDS for crossing safety are shown in the three lines of the top graph as a function of the number of crossings at which new or improved protection has been installed during the past 10 years. Bottom graph shows distribution of two types of protection equipment in terms of number of crossings so equipped each year.

Trend Is to Share Costs

As shown by the accompanying graph, the number of crossing projects paid for by joint railroad and public funds has been increasing over the past 10 years. With the tremendous increase in vehicular traffic, municipalities have recognized the need for improved protection and, more important, the responsibility for sharing installation costs with the railroads. Several states, such as Illinois, have long recognized the need for improved protection and have been prompt to supply state funds to help pay for these projects.

C&NW experience from their two-year, 330-crossing program, has been that where the form of protection was improved in character, e.g., gates to replace wigwags, local or state funds could be obtained to pay part of the cost at certain locations. At DeKalb, Ill., automatic gates were installed at six crossings to replace manually controlled wigwags. The total estimated cost was $203,839, of which $89,241 was paid from government funds. At one crossing in Des Plaines, Ill., automatic gates were installed to replace flashing-light signals. The total cost was $12,840, of which $11,072 was paid by government funds.

In recent years the railroads have contended that the public as highway users should share in the cost of maintaining crossing protection equipment. One of the first states to recognize this responsibility has been Virginia. The sharing of maintenance costs applies to all "automatically operated gates, wigwag signals and other electrical or automatic crossing devices at highway grade crossings outside of cities and incorporated towns." The railroads work out an agreement with the State Highway Commissioner. If they are unable to come to an agreement on the maintenance costs, the railroad can petition the Virginia State Corporation Commission for a hearing, after which the Commission decides the issue.

Just recently the North Carolina legislature passed a law requiring the State Highway Commission to pay one-half the costs of maintaining railroad grade crossing protection equipment. The law applies to the more than 500 signals now in the state (previously maintained by the railroads) and to any that will be installed in the future. It is estimated that such maintenance costs will be over one-quarter of a million dollars a year.

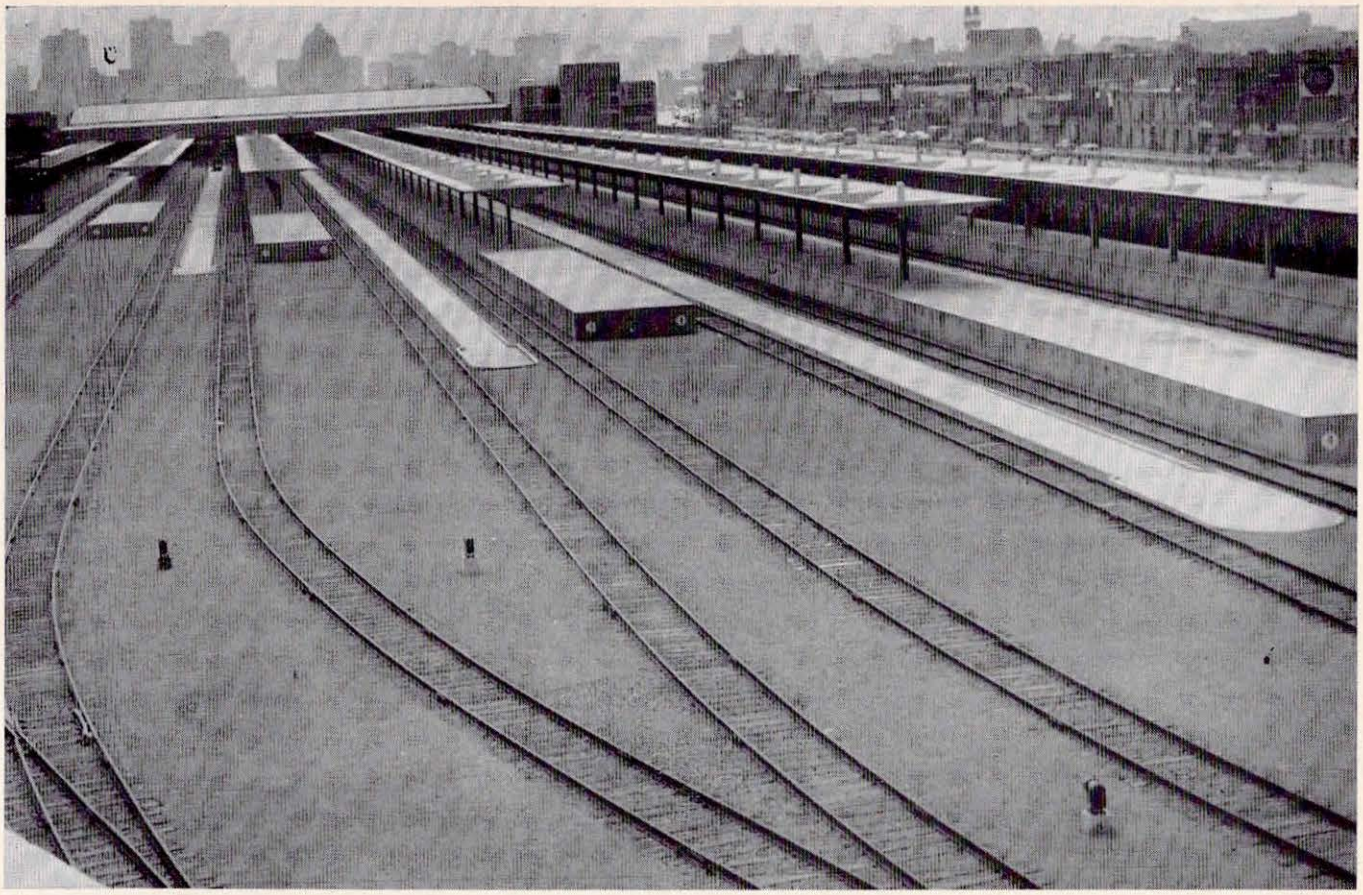
Over 14,000 Crossings

In the past 10 years, flashing-light signals only were installed at 10,012 highway-railroad grade crossings, according to figures furnished by the railroads to Railway Age for its Annual Review and Outlook each year. Flashing-light signals with automatic gates were installed at an additional 4,228 crossings. Sources of funds in this 10-year period were as follows, according to number of crossings equipped: Railroad—6,934; public—1,302; joint (railroad and public)—6,004.

Two major factors have contributed to the growth of crossing protection installations over the last 10 years. One has been the increase in motor vehicles. The second has been the return on investment that can be realized from highway crossing protection equipment.

The C&NW will realize a $2 million saving every year in wage costs by retirement of crossing watchmen and gatemen. This is approximately 59% annually on the capital invested by the road.

Here are a few specific cases: Wheaton, Ill., automatic gates with speed selection at nine crossings cost $363,000. Wage savings are $100,452. The return on investment is 35.4%. At one crossing in Kenilworth, Ill., the C&NW spent $29,375 to install automatic gates to replace manual gates. The wage saving is $17,358 annually, which is equivalent to a 68% return on the cost every year.



TRAIN YARD of Mexico City's new Buenavista Station has 12 tracks; the longer ones can hold 20-car passenger trains. High platforms are for passengers; alternate track-level platforms for baggage and express trucks.

Mexico City Gets New Terminal

Travelers arriving in Mexico City by rail now get a first-class "first impression" of the nation's capital.

The reason is a spanking new passenger station built at an approximate cost of $4,640,000.

The new facility, Estacion Buenavista, is just north of the former temporary station built in 1937. The three-story station building is designed to accommodate 10,000 passengers daily. The station, built of steel and concrete, has a green-tinted glass facade which fronts on a large parking esplanade. A system of covered walks, almost surrounding the station, protects patrons during inclement weather.

The main floor of the station has a huge, high-ceilinged concourse. The concourse is reached by ramps from the ground floor, and by stairways from the upper story. It contains window counters for the sale of first-class tickets, and large train-schedule boards operated from a signal room. Luminous signs direct the traveler to the proper train platform. Also on the main floor are a restaurant, a long soda fountain, lounges, toilets, several shops, a parcel room, post office and a telegraph office. A sound-and-signal room and an administrative office round out the facilities on this level.

The ground floor contains window counters for the sale of second-class tickets, a waiting room and a snack room. From a baggage room at the east end of the ground floor, baggage is carried to trains through special independent passageways.

The station also has a first-aid room, a train crews' tool room and an old-archives room.

At the easterly and westerly ends of the new station, connected to the main concourse, are two four-story buildings. These house the general manager's office, his staff, and related departments.

Behind the station is a train yard with 12 tracks holding up to 20 cars.

Two types of train platforms are provided. One is at car-floor level, the other at track level. The high and low-level platforms are alternated. One is for passengers, the other for baggage and express trucks. Passenger platforms, protected by butterfly-type shelters, are provided with electric lights, telephones and an intercommunication system connected with an interlocking tower near the entrance to the train yard. Beneath the high platforms are tunnels for housing the mechanical and electrical installations.

The three-story interlocking tower houses the necessary batteries on the ground floor, the relays on the second floor. The GRS "NX" control panel and operator are on the upper level. Three walls of the upper level are of glass to give the operator maximum visibility. Wide overhanging eaves shade the glass walls. The red-painted roof of the tower, as well as those on the butterfly shelters and the station buildings, is covered by Follansbee seamless terne roofing, with standing-seam construction.

Presently, over the six trunk lines serving Mexico City, 27 trains arrive daily and 27 depart. All but five each way use the new station. The other 10, being narrow-gage trains, continue to use the San Lazaro depot.

Better Materials Handling Can B

Savings per carload on unitized shipments*

Item	Unit	Quantity per Unit	Savings (average)
Air brake cylinders	Pallet	4, 6, 8	$30.00
Battery, renewals	Pallet	various	65.00
Brake beams	Bundle	20, 25, 30, or 40	43.00
Journal boxes	Pallet	8	43.00
Electrodes	Pallet	1,000 to 3,000 lb	49.00
Fusees	Pallet	18-30 gross	46.00
Brake shoes	Skid boxes	various	70.00
Coupler yokes	Bundle	5 and 8	59.00

*Data taken from 1959 report, Committee on Materials Handling, Purchases and Stores Division, Association of American Railroads.

The science of materials handling is making rapid advances—both in equipment and in methods. Railroads are becoming increasingly aware that they can effect substantial economies in many different fields by keeping abreast of those advances, and by applying the new techniques. Here are some "success stories" of savings already achieved, which show that the way to further accomplishment lies in: (a) Eliminating handling wherever possible; and (b) doing what remains as efficiently as possible.

The main objectives in any materials handling analysis or operation all boil down to one common aim: Reduce costs.

The railroads are doing this in a number of ways, with a variety of equipment and with improved methods —some of the latter borrowed from outside industry, others "home grown." Here, for example, are some of the results of studies carried out over the past year by the Purchases and Stores Division of the Association of American Railroads.

First vital phase of materials handling is packaging. Loose items and materials are more difficult—and more expensive—to store and to move from place to place than are materials which are efficiently packaged in easy-to-handle form.

To raise the level of packaging efficiency, the Division's Committee on Materials Handling has been working with a number of railway suppliers—not only to decrease railroad costs, but in many instances to lower the manufacturers' costs as well. Certain items, the committee found, are being received in "standard" packages by practically all railroads. Among these are batteries, fusees, lamps, picks, welding rod and a host of other products. The standard packaging of such materials not only has cut railroad handling costs, per se, but also has cut their costs for checking, inventory taking and control, etc.

From a questionnaire which the committee distributed, it was found that 15 of 36 railroads are getting their track bolts and spikes in metal containers. Such containers are quite a bit easier to handle than kegs, boxes or loose items. Twenty roads are getting their bolts and spikes in wooden containers; one reported receiving such materials in cardboard containers. Metal containers, it is known, lend themselves ideally to palletizing. Two roads reported they are receiving such containers on pallets from the manufacturers; twelve that they are palletizing the containers as received for their own storage and handling convenience. Eighteen roads said they would prefer metal containers—not only to ease handling, but also to protect the contents from the elements. The ideal would be to have all manufacturers furnish such materials in metal containers on pallets. This goal is being approached rapidly.

Most roads, it was revealed, receive their journal bearings individually packaged. Several roads have gone a step further and are getting their journal brass both packaged and palletized. Two roads revealed, in fact, that they are getting journal brass packaged in wooden boxes at no additional cost, and supplied on pallets.

Often the suppliers cannot or will

the Key to Substantial Savings

not accept the additional costs of providing railroad materials on pallets or "specially" packaged. To eliminate the extra charges often made for such services, the committee, in cooperation with suppliers' groups and the Materials Handling Institute, has been holding special meetings to iron out such objections. Although some areas exist where suppliers feel the railroads are being unduly unreasonable and, conversely, where railroads feel suppliers are being overly stubborn, mutual cooperation is providing answers to individual problems. Certainly, great progress is being made toward standardized packaging and increased unit loading and palletization.

A few of the items studied by the committee indicate the kind of savings which can be realized from improved packaging and handling. Brake shoes, furnished in skid boxes (supplied by the railroads) can be handled—by the railroads—at savings averaging about $70.00 per carload. Likewise, batteries, furnished on pallets, are easier to handle to the tune of some $65.00 per carload. Coupler yokes, bundled in quantities of five or eight, can be handled nearly $60.00 more cheaply per car than if furnished otherwise. And so it goes. Items which are not presently available in palletized form are being looked at intently by the railroads. Hopes are high that, soon, materials such as castings, filters, hose, paints, lubricator pads and others will be available in packages which will allow the roads to reduce their handling costs.

One step taken recently toward improved supplier-railroad cooperation in the matter of packaging was this: Some roads have agreed to waive plant inspection of certain materials and accept destination inspection. Since this practice reduces suppliers' costs, many manufacturers have agreed, in such cases, to assist the railroads in reducing the costs of palletizing and unit loading. Materials found defective at destination would, they agree, be replaced at no cost to the railroads. That's another case of cooperation paying off.

Equipment, too, is being continually scanned by those roads most alert to the potential savings to be derived from improved materials handling techniques. For example, several roads have purchased hydraulic cranes equipped with grabs which will handle mounted wheels without need for a hook-up man. Not only do such trucks save labor in this operation, but considerable time as well—the crane operator need only drive up to a carload of wheel sets, lower his hook, raise the wheels and be on his way.

The handling and packaging of lumber has been another important area of study on the railroads for a number of years. The practice of receiving lumber strapped or banded in unit bundles has now reached the point where most companies accept it as standard and make no premium charge for supplying such packaging. The saving derived from receipt of packaged lumber varies, depending upon the railroad's facilities for handling. Some roads claim they save as much as $5.65 per thousand board feet; others, less mechanized, say they realize a saving of as little as $1.50 on the same quantity. Nevertheless, there is a saving, and as time goes on more and more railroads are specifying such packaging. Equipment has been developed and is continuing to be developed for economical handling of unitized loads of lumber; even greater savings may be realized as new and better equipment is developed and put into service.

Equipment Costs

Naturally, it costs money to acquire and maintain modern materials handling equipment.

As new machines are placed on the market, most roads carefully study the potential savings they might derive from such equipment before buying it. In some cases, certain roads are finding it more economical to lease such equipment—especially the more specialized types— rather than purchase it outright. Often, too, servicing contracts prove attractive, especially in regions far from central equipment shop areas.

Analyses of the costs of operation of various types of materials handling equipment are also being carried out with an eye toward greater savings. An example is a study recently made comparing the cost of operation of a fork-lift truck operated on gasoline and run by LP-gas. Including fuel, lube oil, filters and labor for changing oil and filters, it was found that, over a one-year period, one road spent over $500.00 to operate a single fork-lift truck. A similar truck, propane gas operated, cost but $115.87 to operate and maintain.

Materials handling savings can be realized in virtually all departments of a railroad—not only in those areas concerned with the supply and transfer of materials to be used for maintenance, but in construction, shop work, operation and the like.

One manufacturer of electric tractors—the Automatic Transportation Company—cites a recent example. In a year's time, Automatic says, the Boston & Maine saved some $32,700 by streamlining its materials handling techniques in a single area—mail and baggage handling. Up until 1956, the B&M used a crew of from 75 to 120 men and a fleet of 34 tractors to handle baggage and mail on a 24-hour basis. The tractors were gas operated. As many as eight men were, at times, employed in maintaining the equipment.

Competitive tests decided the B&M's management on purchasing new equipment; Automatic won out with its electric "LTWE" tractor. As a result, 24 new units were bought to replace the 34 old tractors. It now requires only three men to handle all maintenance, and cold weather starting and certain other difficulties have been eliminated as well. The savings: 50% in fuel; 75% in maintenance parts; and 60% in maintenance labor.

This is, of course, only one isolated

ELECTRIC TRACTORS like this are now used by the B&M in place of former gas-operated units.

DOWN A 7 PER CENT GRADE, the tractor and trailer handle easily.

case. The point is that railroads are rapidly waking up to the realization that they can save themselves a substantial amount in out-of-pocket costs by keeping up to date on materials handling equipment and methods.

Materials handling, as a "science" has advanced rapidly. In May of this year, materials handling equipment orders increased some 11% over the previous month—the fifth straight month that sales in the field have risen. Thus, with new advances in equipment, with the assistance of study groups in organizations such as the Materials Handling Institute and the American Standards Association, to name but two, and with the invaluable information continually being provided by the AAR's Purchases and Stores Division, the railroads are well on the way to great improvement in their methods of handling materials—not only their own, but their customers'.

Railroading After Hours with Jim Lynch

NO TRAINS AT DEARBORN—On the question of what's the biggest town in North America with no regularly scheduled passenger train service—Dearborn, Mich., is nominated by G. J. Riordan, assistant auditor of passenger revenue, New York Central, at Detroit.

Dearborn, says Mr. Riordan, has upwards of 135,000 people and has had no passenger trains for five years—its station now being used as an appliance discount house.

Dearborn, of course, is really a suburb—you can't tell where Detroit leaves off and it begins. The NYC has a move afoot to have its Albany station just across the river in Rensselaer—which would leave Albany, technically, unserved by passenger trains. But only technically. Because a station at Rensselaer would hardly be any further from the city center than the present Albany station. There's no parallel set-up at Fall River and New Bedford.

WANT A FRIEND IN INDIA?—I have a letter from a young railroader (35) in India whose job seems to be equivalent to that of a transportation inspector in this country. He would like to compare notes with American railroaders—preferably those with operating-transportation experience like his own. His name is Harbhajan Singh Mudhar and his title is movement inspector. You may address him in care of the Western Railway, House 1/21, Katha wala Building, Bhim Mandi., Kotah Jn., India.

Mr. Mudhar tells me he started railroading in 1947 (after 4 years in the army), in train service. He became an assistant train controller in 1953 and has just recently been promoted to movement inspector.

HOW TO 'SAMPLE'—I got a little booklet the other day about "Sampling in Railroad Accounting," from AAR Vice President A. R. Seder. It tells in simple language the important story of statistical sampling—and how you can sometimes get greater accuracy from a small sample, if skillfully selected, than one of 100%.

There are many places where millions of figures and calculations are being produced, where equally satisfactory results could be secured from a small sample. The question is, how do you do it? This booklet gives the answer or, anyhow, points that way.

With clerical work costing 5¢ a minute (as a fellow said to me the other day), you have to look sharp nowadays to avoid spending $5 in order to collect or assign $1.

RULE 99—I got to talking to Charley Patterson, chairman of the team that runs the New York subways (and formerly operating vice president of one road in the East and another in the Northwest). I asked him what he thought about the flagging rules, now that he is with an operation that has no Rule 99. He said he sees no reason for flagging where blocking is absolute.

They haul a thousand people at high speed on the rapid transit lines, with a crew of 2 men—one motorman and one trainman. In Britain, where the record of freedom from collisions is certainly as good as ours, there is no Rule 99—but, there again, a red board means stop and stay stopped, not stop and proceed.

MORE WIRE SHORTHAND—Santa Fe Agent Charles Goebel at Atchison has a copy of "Telegraph Rules and Regulations," AT&SF, dated 1882. It has a long list of numbers that can be used to transmit standard messages. His list jibes completely with that I had here on July 27—except for 144 (who is at the key?). On Mr. Goebel's list that question was indicated by 134.

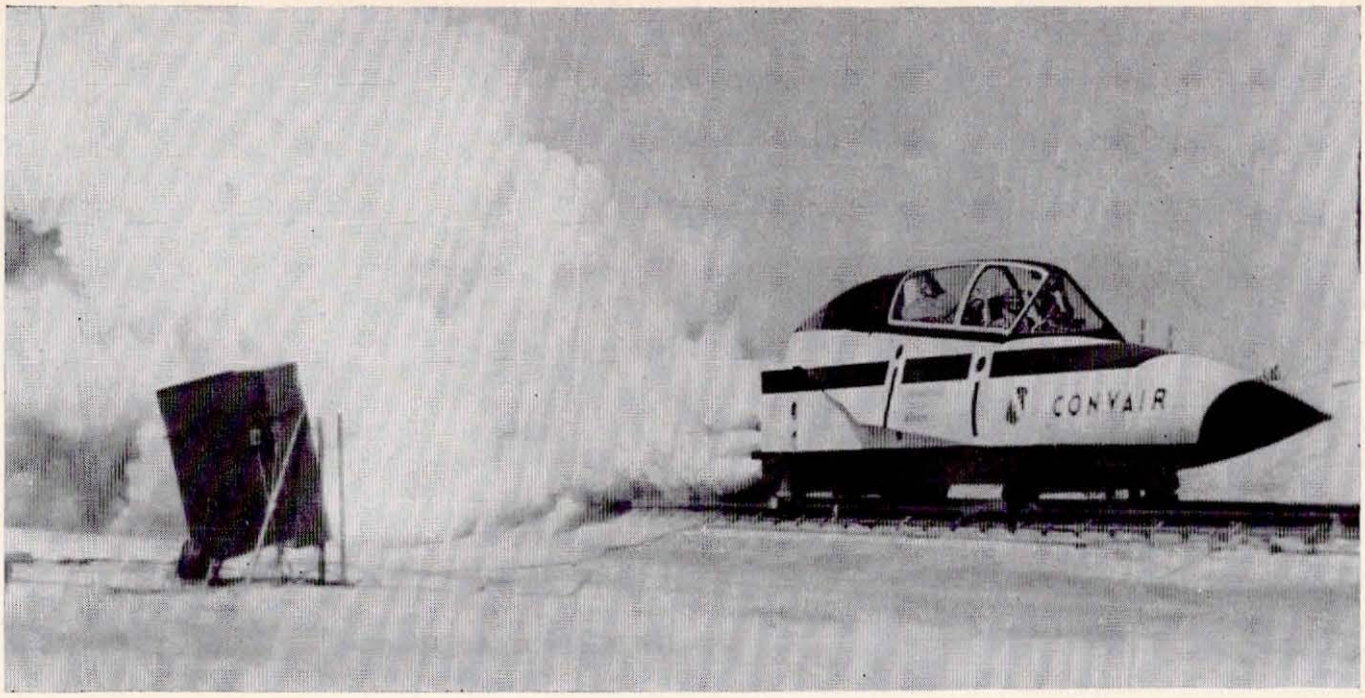
Mr. Goebel also had some more: 2—give me the correct time; 3—is that message okay?; 6—I am ready for business; 18—what's the matter?; 44—get quick answer. The letters DS were the dispatcher's signal, taking precedence over everything but 9. Mr. Goebel says only a few of these old signals are still in current use.

"BEST REGARDS" BY WIRE—Terminal Trainmaster T. P. King of the Atlanta Joint Terminals (A & WP and Ga.) says that, in his part of the country, the wire signal 73 means "Best regards." His information differs a little from that of H. S. Cable (RA, July 27, p. 66) on the signal 4. To Mr. King this numeral means: "When shall I go ahead?" He says, also, that "Everybody copy" is expressed by 15; "answer at once for train order, etc." is 9; and "give me your car report" is 28.

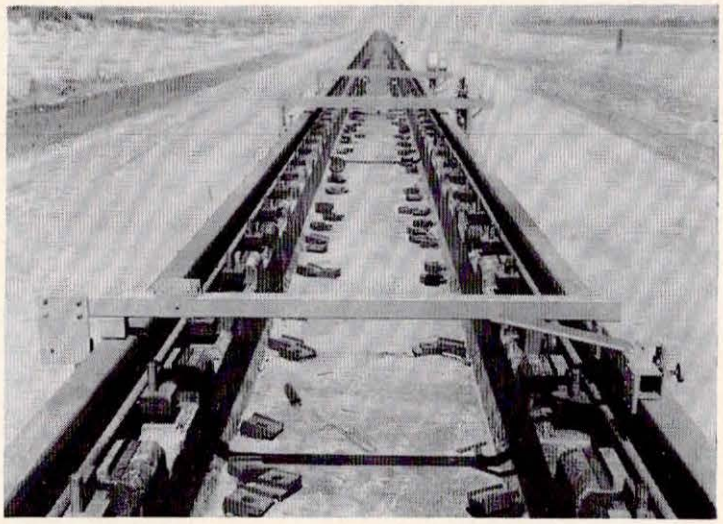
HIGHWAY CAPITALISM—President Paulsen Spence of the Louisiana Eastern at Baton Rouge (still a staunch advocate of steam power, by the way) has furnished me a copy of a letter he has sent to leading Washington legislators—on the subject of highway finance.

Noting the trouble Congress is having in raising money to keep the federal highway construction program going, Mr. Spence asks them why they do not take the logical course of financing these highways by tolls. He told the lawmakers, also, that tolls should be sufficient, not only to cover capital and maintenance costs, but also to provide for the same rate of state and local taxation that is exacted of railroads.

I hope Mr. Spence's wisdom will win Washington converts— but I'm not over-sanguine. Talking tolls to most highway fans is like preaching capitalism at the Kremlin.



JET-POWERED ROCKET SLEDS, weighing up to 100,000 lbs, can be tested on the new track. Other vehicles, such as missiles and complete weapons systems, also can be assessed for performance at subsonic, transonic and supersonic speeds.



NO DEVIATION of more or less than .036 in. in alinement was allowed for the entire length of the new test track. Optical instruments, reading to .001 in., were used at night while atmospheric conditions were best for getting true alinement.

Jet Test Track Is All Welded

Wanted—by the Air Force Flight Test Center at Edwards Air Force Base, Cal.—a test track 20,000 ft long, capable of testing jet-powered rocket sleds weighing from seven to 50 tons at speeds as high as Mach 4, or about four times the speed of sound.

Such a track was needed to permit full-scale and model flutter tests of complete weapons systems or of full-scale components. It was needed also to assess at subsonic, transonic and supersonic speeds the performances of parachute-type recovery systems, seat-ejection and canopy-jettisoning systems, and rocket and missiles systems.

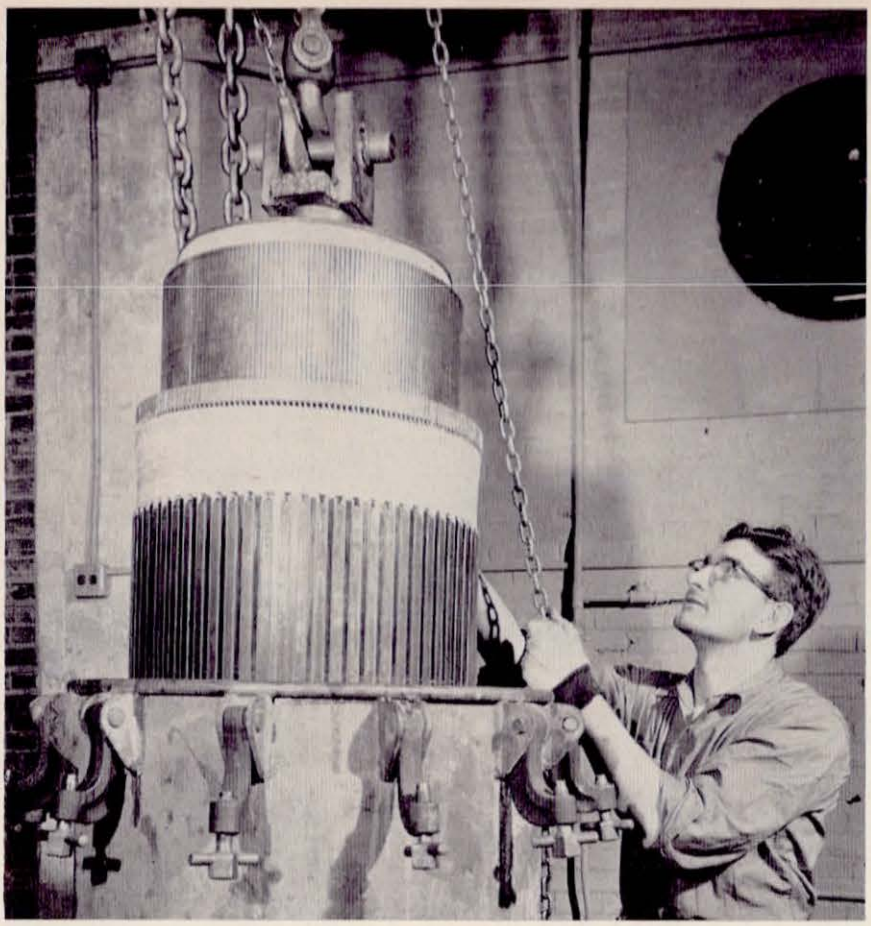
The new track is now available. It was obtained by building a 10,000-ft extension to the existing 10,000-ft track (which could test sleds weighing up to 13,500 lbs at speeds of up to 2,900 ft per sec), and then reconstructing the original track to the new standards.

Because of the extremely high speeds of the sled vehicles, the new track had to be built with the utmost precision. Any deviation either in line or surface could result in wrecking the flight-test vehicle and nullifying the tests. Thus, specifications called for extremely close tolerances. The requirements for alinement, for example, were established at plus or minus .036 in. for the entire length of the track.

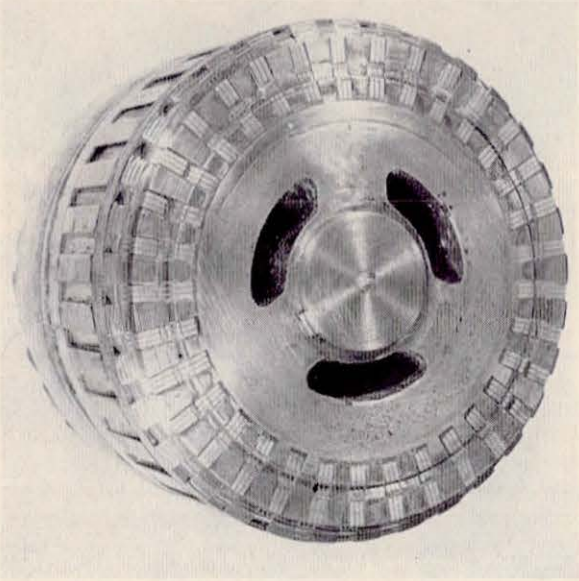
In constructing the new track it was decided to use continuous welded rail supported by a continuous, steel-reinforced concrete H-beam, extending 2 ft below ground level. The welded rail, it was reasoned, in addition to eliminating all joints, would aid in the preservation of true line and surface.

Specially rolled crane rails, weighing 171 lb per yd and having a cross-section of about 18 sq in, were selected. This rail was welded by the standard oxyacetylene pressure process, except that greater pressure was utilized during welding.

A pressure of about 53,000 lb was applied by hydraulic clamping de-



HIGH-VACUUM IMPREGNATION is possible because of the solventless nature of the epoxies used. Motor Coils does all impregnating for the PRR.



RESIN COMPLETELY FILLS all openings between coils and core of this sectioned armature. Absence of voids promotes heat transfer process.

patible with each other and produce an end product with the mechanical, thermal and dielectric properties satisfactory for rugged railroad service. The paper, linen, and phenolic varnish of traditional insulations play no part in this new system. Tapes now used are glass-backed mica in which the mica is secured with an epoxy that does not alter the characteristics of the resin subsequently used to impregnate and unitize the entire coil.

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Motor armatures and finally the components of the main generator have successively been redesigned and improved with the techniques developed. Armatures are now being banded with polyester-impregnated glass tape bands instead of the traditional steel wire. This is now the standard on the PRR. Armature short circuits can result in the snapping of steel bands which unwind as the armature rotates and damage the entire motor. Glass tape banding eliminates this hazard and saves over $4,000 in repair costs per motor when short circuits do occur.

All these developments and improvements are being made available to the electrical industry and to other railroads. One PRR officer recently expressed the opinion that what has been produced is nearly the "ultimate," taking into account today's materials. He said the necessity for the traditional mileage overhaul for motor armatures and frames should be virtually eliminated. Several major motor manufacturers are currently working to develop their own synthetic resins equivalent to that produced by Motor Coils Manufacturing Company.

NP Officer Warns of Reds' Rail Build-Up

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"The men in Moscow and Peiping, in their coldly practical way, are investing their money, materials and manpower in the type of transport that will give them the most carrying power for that investment," he declared. "They are putting their chips on the railroads.

"In Russia they are going full speed ahead to enlarge and upgrade their railroad plant . . . Communist China, starting with little or no railroad system, has built up a network of more than 18,000 miles in just a few years.

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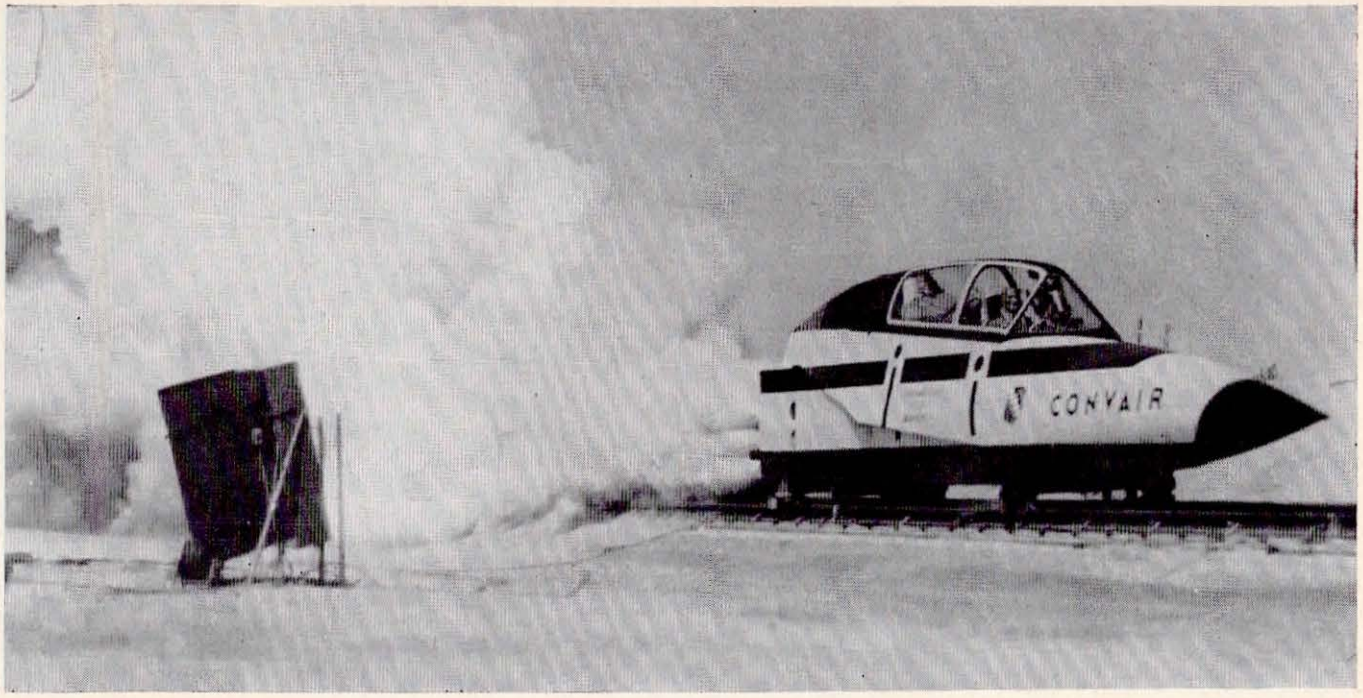
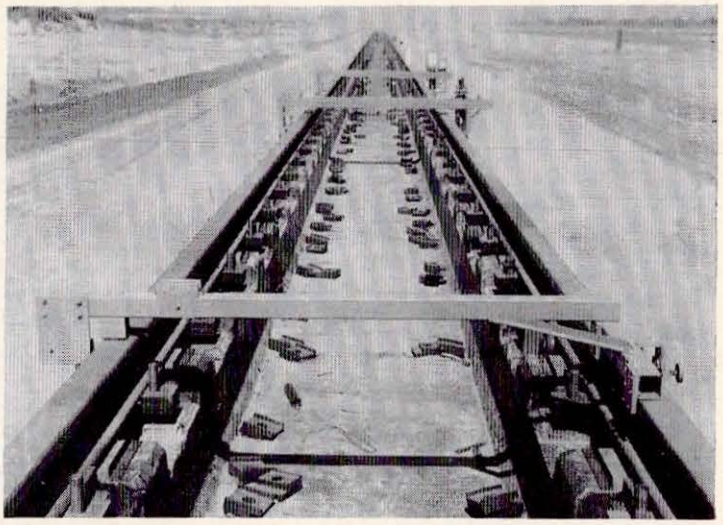


JET-POWERED ROCKET SLEDS, weighing up to 100,000 lbs, can be tested on the new track. Other vehicles, such as missiles and complete weapons systems, also can be assessed for performance at subsonic, transonic and supersonic speeds.



NO DEVIATION of more or less than .036 in. in alinement was allowed for the entire length of the new test track. Optical instruments, reading to .001 in., were used at night while atmospheric conditions were best for getting true alinement.

Jet Test Track Is All Welded

Wanted—by the Air Force Flight Test Center at Edwards Air Force Base, Cal.—a test track 20,000 ft long, capable of testing jet-powered rocket sleds weighing from seven to 50 tons at speeds as high as Mach 4, or about four times the speed of sound.

Such a track was needed to permit full-scale and model flutter tests of complete weapons systems or of full-scale components. It was needed also to assess at subsonic, transonic and supersonic speeds the performances of parachute-type recovery systems, seat-ejection and canopy-jettisoning systems, and rocket and missiles systems.

The new track is now available. It was obtained by building a 10,000-ft extension to the existing 10,000-ft track (which could test sleds weighing up to 13,500 lbs at speeds of up to 2,900 ft per sec), and then reconstructing the original track to the new standards.

Because of the extremely high speeds of the sled vehicles, the new track had to be built with the utmost precision. Any deviation either in line or surface could result in wrecking the flight-test vehicle and nullifying the tests. Thus, specifications called for extremely close tolerances. The requirements for alinement, for example, were established at plus or minus .036 in. for the entire length of the track.

In constructing the new track it was decided to use continuous welded rail supported by a continuous, steel-reinforced concrete H-beam, extending 2 ft below ground level. The welded rail, it was reasoned, in addition to eliminating all joints, would aid in the preservation of true line and surface.

Specially rolled crane rails, weighing 171 lb per yd and having a cross-section of about 18 sq in, were selected. This rail was welded by the standard oxyacetylene pressure process, except that greater pressure was utilized during welding.

A pressure of about 53,000 lb was applied by hydraulic clamping de-

vices. An average of approximately 7 min was required for each completed weld, as compared with an average of about 5 min for 115-lb rail.

The welds were normalized and, while they were still in a heated plastic state, minor adjustments in alinement were made. In about 50% of the welds it was found that displacements greater than the allowable tolerance had taken place. These ranged from .025 to .040 in. To correct them a special jacking device was built adjacent to the normalizer. The normalizing and straightening equipment was designed to move longitudinally so that it was unnecessary to move the rail for this operation.

Grinding of the welds by abrasive belts was done before the rails were installed. However, the joints were not finish-ground until after the rails had been anchored in position. Grinding specifications called for no portion of the weld to be above the adjacent portion of the rail and no point to be more than .005 in. below. This applied to all portions of the ball of the rail for a distance half way down the weld.

To obtain an accurate base line from which to line the rails, the U. S. Geodetic Survey and the Corps of Engineers established bench marks and alinement points on brass monuments attached to the concrete adjacent to the "line" rail at intervals of 51 ft.

Temporary rollers were placed along the track bed between the tie-plate seats to facilitate stringing the rails. The rollers also served to lift the rail slightly off the plates to obtain uniform axial loading along the entire track length.

Special optical instruments were used to aline the "line" rail, and mechanical gages with dial indicators were used to set the companion rail. One set of instruments was used for vertical alinement and another for horizontal. These were used at night when atmospheric conditions were best.

One requirement was that the rails be installed in such manner that a final zero-stress temperature of 115 deg F would be achieved. To produce this result, hydraulic jacks and tensioning nuts were used to hold the rails at proper tension until clamped in place. The rails were anchored every three feet by steel bolts.

To dampen vibration, the spaces between the tops of the concrete beams and the undersides of the rails between the tie-plate seats were filled with asphalt.

Facts included in this article about the Air Force's new test track are taken from an address prepared for presentation before a recent meeting of the American Welding Society by W. E. Donalds, engineering service representative, Linde Company, Division of Union Carbide Corporation, and E. S. McKittrick, a contractor at Los Angeles.

Machine Cuts Copying Costs

Speed and efficiency are increased, delays and chances of error reduced, through the Milwaukee's use of a new copying machine in the stores department facilities of its Milwaukee shops.

Under the new system, a single "requisition for material" form is used. There's no need for time-consuming transcription from stock transfer requisitions to shipping notices (a routine that required the services of three typists).

The change followed a survey by the Charles Bruning Company of Chicago and involved installation of a Bruning Model 250 Copyflex machine. One measurable result of the change: work that once required 24 hours now goes through the machine in four. It operates this way:

- The original requisition goes through the Copyflex to produce one (yellow) shipping notice which is sent to the storekeeper at destination.
- Copyflex then produces two (green) stock transfers, one for the district storekeeper and one for the division's records.
- When the requisition is identified as a direct charge, it's run through again to produce a (white) copy for the receiving storekeeper.

The same procedure is followed for each shipment—and after each shipment the extension in the amount column is blocked out with a rubber stamp to insure against a duplicate charge. After the requisition is processed for the necessary copies, it's returned to the stockman to be handled to conclusion.

When the requisition is not completed in three shipments, a pink copy is sent to the district storekeeper at the shipping point, reminding him that the order has not been completed and that steps should be taken to determine the reason.

Time savings provide one measure of the installation's value. But, according to Rudolf Beier, chief stockman of the Milwaukee stores operation, estimated savings are even greater in terms of efficiency, in the reduction of clerical errors and in the elimination of delays in filling orders.

COPYFLEX AT WORK—It's cutting costs for the Milwaukee Road at the stores department facilities of the company's Milwaukee shops.

PRR Program Improves Motors

New insulation system and redesign of components cut costs and improve locomotive performance

Current savings of a half-million dollars annually, and eventual savings of possibly six times that figure, are the result of a Pennsylvania program to improve traction motor insulation. Along with the new insulation system, PRR engineers have perfected a number of other improvements in motors and techniques for repairing them.

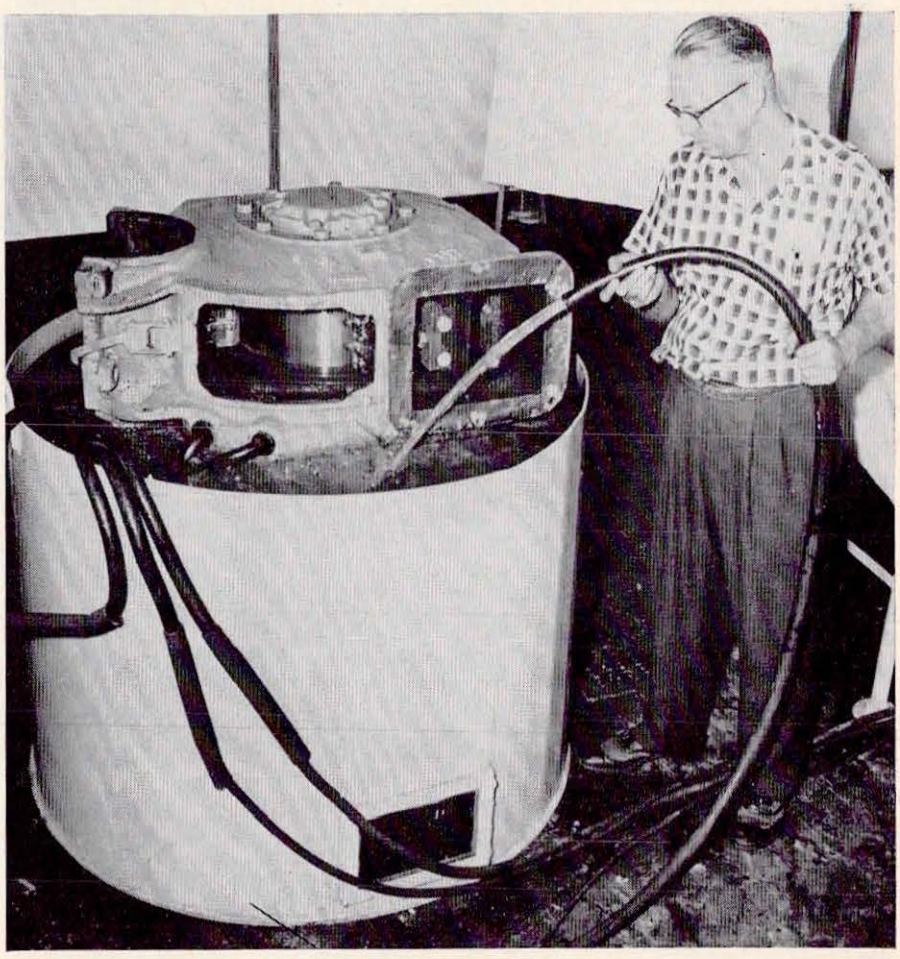
The new "integrated insulation system" already has been applied to over 900 diesel and electric locomotive traction motors and to 68 diesel main generators. There have been no failures, according to PRR motive power officers. It is expected that these motors and generators may operate five to ten years longer than has previously been the case. The railroad has now adopted the "integrated insulation system" as standard for its 2,710 diesel and electric units.

As these locomotives come to the shops for repairs, motors and generators are being rebuilt with the new insulating system. Among its many advantages, the railroad says, is the insulation's exclusion of moisture, which should prevent any recurrence of the damage that crippled GG-1 electric locomotives during the unprecedented snow storm of February 1958.

Key to the new insulating system is an epoxy resin providing the mechanical support for large natural mica splittings that provide the high dielectric (insulating) strength.

PRR engineers do not take credit for discovering epoxy resins or even for originating the principle of resin-impregnated coils. A number of such processes have been developed in the electrical industry in recent years. But PRR engineers encouraged their application to large railway-type motors after becoming aware of the heat-transfer properties of properly chosen and properly cured epoxy resins.

Work started about four years ago when analysis of six years of records for the Pennsy's diesel fleet showed the traction motor to be a high-failure component. Traditional solution for damage caused by overheating has been application of insulating systems with greater and greater temperature resistance. Instead of trying to beat the heat, the Pennsy chose a novel approach—every effort was made to get the heat out of the traction motor.



EFFECTIVENESS of new insulation system is shown by this standard diesel traction motor which is operating in water tank with armature and field coils completely submerged. PRR uses epoxy resin to insulate all electrical components of 3-ton motor except commutator and brushes.

This is not easy. Most electrical insulations are also thermal insulators—that is, they do not conduct heat. The characteristic which makes epoxies attractive is that, with proper formulation, a material can be produced which is both an electrical insulator and a thermal conductor. The PRR was on the track of a material which could get the heat out of its motors. When properly cured, the material makes a virtually voidless solid with no microscopic air bubbles to trap heat.

PRR electrical engineers then interested Motor Coils Manufacturing Company of Pittsburgh in experimenting with various epoxy formulas while they themselves worked on ways and means of applying the resin so it would work. Over two years ago, the first epoxy-impregnated field coils went into service on PRR locomotives. They ran a little hotter than desirable, but proved to be so durable and resistant to severe service conditions that the railroad men knew they were on the right track. Further research improved the epoxy formula until a few months ago one was developed which adds only a negligible amount to the operating temperature of a bare coil.

New methods of application were developed along with the epoxy resins. Each section of the motor to be insulated is immersed in liquid resin and then heat-cured until all its components are permanently bonded together by the impervious epoxy. It resists moisture, grease, oil and similar contaminants which often penetrate other insulations and cause short circuits or grounds.

The PRR chooses to call this an "integrated insulation system." This means that all insulating components are com-

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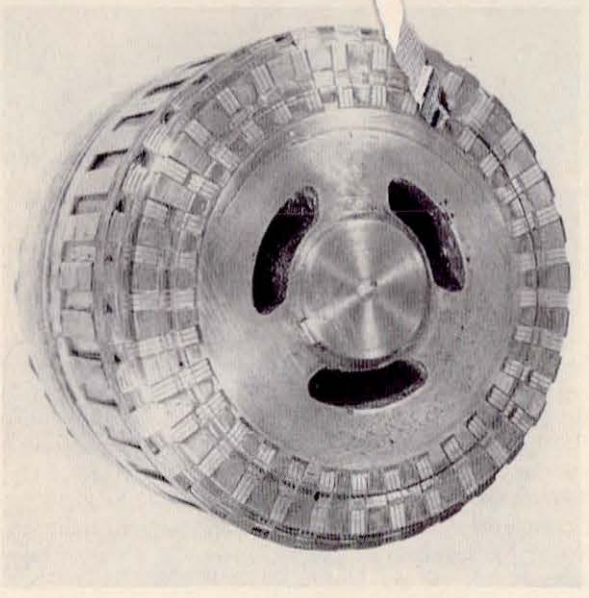

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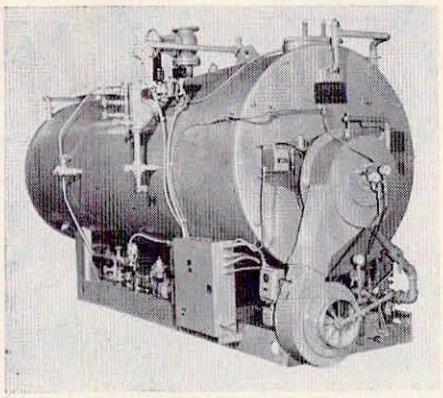
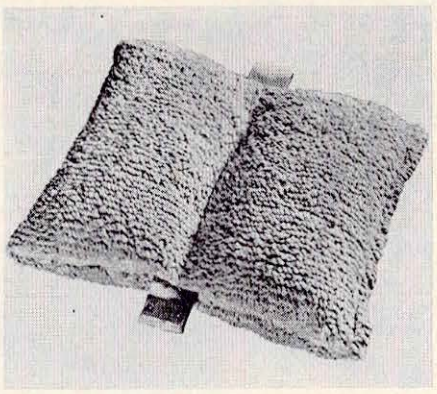
New Products Report



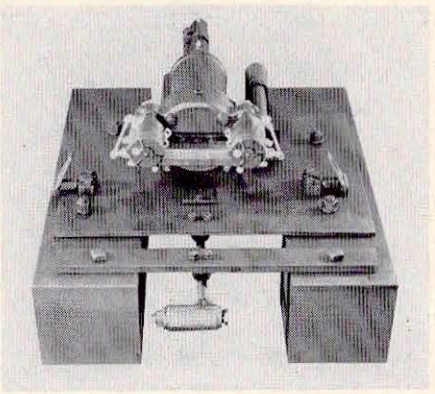
Packaged Steam Generator

The Model AA Amesteam packaged steam generator is a low-pressure, air-atomizing oil burner and an all-new ring type gas burner. It provides stable, uniform flame patterns and cleanly burns all grades of oil and gas over a modulating range of 5 to 1. Units for heavier oils include combination steam and electric fuel preheaters. No. 4 oil may be burned with little or no preheating. *Ames Iron Works, Inc., Dept. RA, Oswego, N.Y.*



Journal Lubricator Pad

A lubricator pad with single continuous wicking action over its entire surface retains 2,500 grams of oil after draining for 3 hr. It consists of a resilient neoprene foam insert covered by a highly absorbent and resilient core of bonded organic fibers and a non-glazing chenille. The pad has been approved by the AAR for limited application in interchange. *Gustin-Bacon Manufacturing Co., Dept. RA., 210 W. 10th St., Kansas City, Mo.*

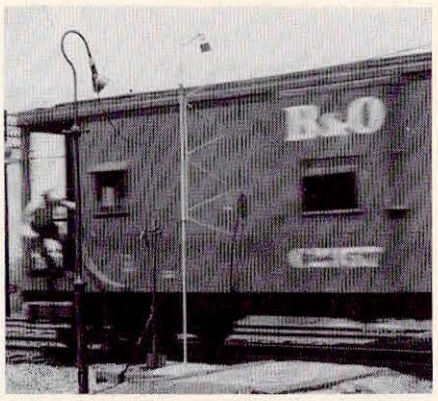


Direct-Acting Switch Machine

A new, faster acting switch machine allows shortening of the detector track circuit length in advance of switch points in automatic classification yards to 14 ft. The total switch movement time of the style DA-10 (shown with cover off) is about 0.4 seconds. It mounts on the same holes and uses the same operating road as previous direct-acting machines. *Union Switch and Signal, Div. WABCo., Dept. RA, Swissvale. Pa.*

Industrial Cleaner

The Pick-a-Back and Castered Tank models of a motorless industrial cleaner are adapted for cleaning the interiors of all types of railroad equipment. The former feeds into a nylon dust receiving bag; the latter feeds into a container that cleans and washes the suction air before exhausting it to the atmosphere. *Vibro-Pneumatic Cleaner Company Division of Patterson Products, Dept. RA, P.O. Box 117, Detroit 2, Michigan.*



Train Order Transmitter

The Fowler train-order transmitter is said to deliver orders safely to train crews up to 105 mph. The orders are string-mounted on a level with engine and trainmen, and held up to 15-in. from side of trains. The forks have a 22-in. spread for easy arm access and point 15 deg in direction train is moving. Transmitter is yellow enamel for better visibility. *C. J. Zone Mfg. Co., Dept. RA, 2245-47 Vandeventer, St. Louis 10, Mo.*

Personnel Carrier

The electrically powered "Station Wagon" is designed for in-plant use as a personnel or burden carrier. Seats can be removed to convert the vehicle from passenger to freight service. Equipped with a suitable coupler, the truck can also be used as a towing tractor. The unit is furnished with either a 12- or 24-volt battery, permitting speeds of up to 10 mph. Capacity is 2,000 lbs. *Moto-Truc Co., Dept. RA, 1953 E. 59th St., Cleveland 3, Ohio.*

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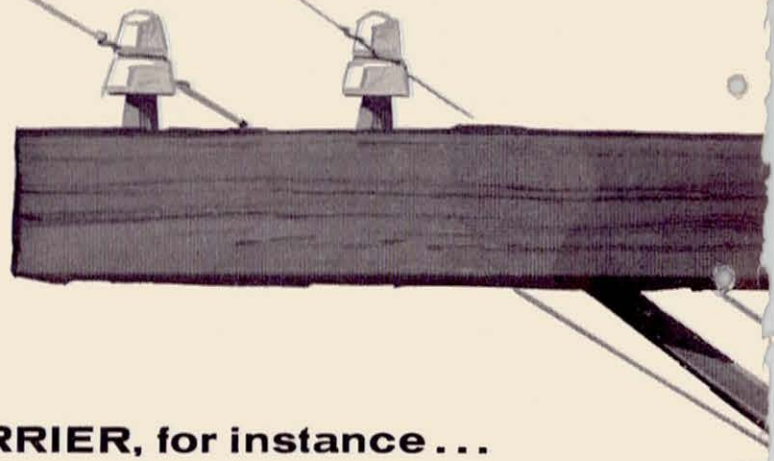

LENKURT LONG-HAUL CARRIER, for instance . . .

Where distance is a problem, the Type 32E Carrier Telephone System is one of the Lenkurt systems available as a solution. It is an economical and efficient means of adding communication channels to existing wire lines.

Type 32E single sideband suppressed carrier terminals are equipped with either three or four channels in the 3-kc. to 35-kc. range, and can be applied over v-f circuits. With the use of repeaters, these channels can be used for high quality, medium- and long-haul circuits.

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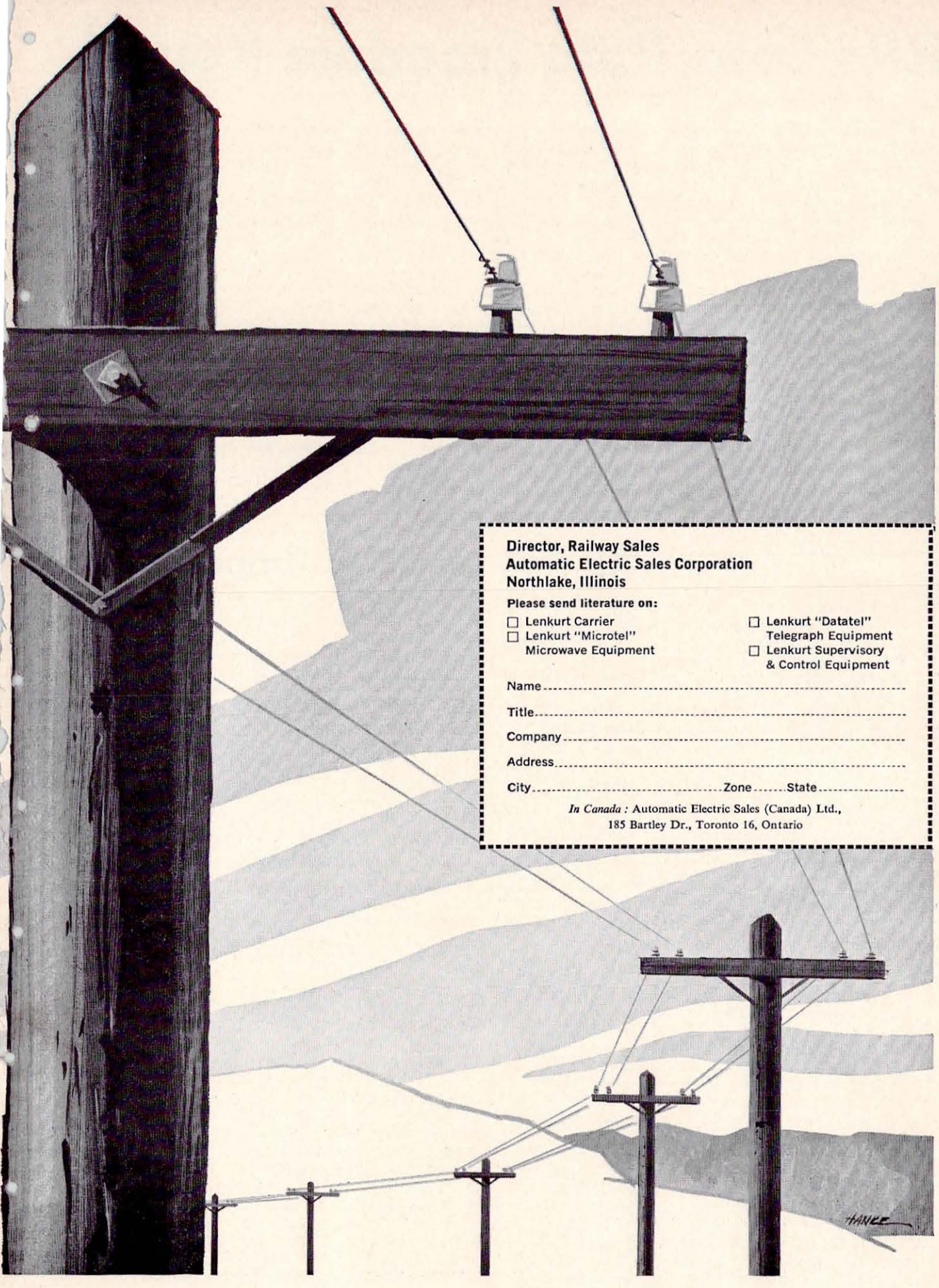

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RRs Lose Rate-Freedom Round

The ICC has ruled that rate-freedom provisions of the 1958 Transportation Act did not end the Commission's authority to consider the impact of proposed rates on a competing form of transportation.

The ruling came in a case, I&S No. 6914, wherein the Commission found just and reasonable reduced railroad rates published to meet water and truck competition for sugar traffic moving from Gulf and South Atlantic ports to Ohio River crossings and intermediate points. The rates, suspended for more than a year but in effect since last April, were assailed by competing water carriers and some sugar shippers and port interests.

The Commission's ruling dealt only with admissibility of evidence, so it leaves major rate-freedom issues still unresolved. Because the assailed rates exceeded the railroads' full cost of handling the traffic, the decision included no Commission policy statement as to whether fully-distributed costs or out-of-pocket-costs-plus will become a general basis for determining which of competing types of transport is the low-cost agency.

"The rates here proposed exceed full cost by considerable margins," the Commission said.

The ruling was nevertheless adverse to the railroads. They opposed introduction by the water carriers of evidence concerning the overall delivered cost of barge transportation, the effect of the rates on the ability of barge lines to attract sugar traffic, and the necessity for the continued maintenance of a differential between rail rates and the cost of shipping by barge.

In taking this position, the railroads relied on language in Section 15A (3), the 1958 act's rate rule, which says that, in a rate case involving competition between carriers of different modes, the Commission "shall consider the facts and circumstances attending the movement of traffic by the carrier or carriers to which the rate is applicable," and that rates of a carrier "shall not be held up to a particular level to protect the traffic of any other mode of transportation."

In admitting the evidence, the Commission relied on language which follows the latter, i.e., "giving due consideration to the objectives of the national transportation policy declared in the act." The Commission said:

"The specific reference in Section 15A (3) to the national transportation policy clearly qualifies the preceding clause, and it is apparent that the evidence to which the respondents object is relevant to the question of whether the proposed adjustment is in harmony with the objectives of the policy."

As to the differential issue, the barge-line evidence was summarized in the Commission's report as a showing designed to make these points: "There are at present no barge rates on any commodity which, when additional accessorial costs to shippers are considered, fail to reflect a differential under the corresponding rail rates"; and "no freight has ever moved, or will move [by barge], even at approximately equal delivered cost."

The Commission disposed of the issue by saying the public interest would not be served by requiring that rail rates which substantially exceed full costs, be kept differentially higher than water costs which, as here, include barge rates on a full-cost-plus-a-profit basis.

The cleared rail rates range from 66 cents per ton less to 91 cents per ton more than the costs of shipping by barge. They supplanted rates which were all higher than the barge costs, by amounts ranging from $1.14 to $2.71. On this point, the Commission cited its Division 2's report in Tinplate from St. Louis Group to Texas, 304 ICC 473,477, which said:

"The respondents are not required to forego fully compensatory rates solely to protect competing carriers. If the barges are the low-cost carriers in fact, they should have no difficulty in maintaining a proper differential under the rail rate."

Air-Rail Marriage Proposed

A "revolutionary" new form of short haul transportation—involving vertical take-off airplanes skimming along over railroad rights of way—has been proposed by the Vanguard Air and Marine Corp. of Radnor, Pa.

A prototype VTOL (vertical take-off and landing) craft is nearing completion, and tests are expected to begin this month. A number of railroads—among them the Pennsylvania—have shown interest in the idea. A PRR spokesman told Railway Age last week, however, that the road does not plan to continue the studies "because we do not believe we would be permitted by the government to go into the aviation business."

Edward G. Vanderlip, president of Vanguard, says a 40-passenger VTOL plane could operate over railroad routes at 3 cents per seat mile, compared to about 20 cents per seat mile for helicopters. Landing facilities would be provided at regular railroad terminals in center city locations by converting present structures or by building new over-track platforms.

Under the Vanguard plan, the railroads would provide all necessary communications, utilizing much of their present equipment. Radar reflectors and beacons would be installed on railroad rights of way. The VTOL planes would normally remain at an altitude of less than 3,000 feet to avoid interference with standard commercial flights—although in turbulent weather the planes could seek higher altitudes, shifting to FAA-controlled flights.

The airplanes would be of the "fan-in-wing" design. Rotors set in the wings would permit vertical take-offs and descents; during flights, the craft would operate as a conventional fixed wing plane. Initial cost of a 40-passenger VTOL plane is estimated at $800,000. Crew costs—for a pilot, co-pilot and stewardess—would run about $50,000 a year.

Post Office Airlift Draws Railroad Fire

Legislation that would make permanent—and expand—the Post Office Department's experimental airlift program came under fire from the railroads last week.

Herbert B. Brand, director of the AAR's Railway Mail Transportation Division, told the Senate Post Office Subcommittee that the public should not be deprived of the right to choose between air and surface transportation in the handling of its mail.

Mr. Brand said railroads don't oppose air transportation for mail moving between the continental U. S. and Alaska, Hawaii and Puerto Rico—but, he said, S. 2402 would go beyond geographical considerations and permit the Post Office to move all classes of mail by air.

He noted that the proposed air service would be used for long-haul, intercity movements, leaving surface car-

riers with low-volume mail traffic confined to smaller points not served by air.

Mr. Brand said railroads are already planning or expanding experiments with piggyback and specially equipped containers and fast freight services for mail. But, he added, under present conditions they don't know whether they will be permitted to provide the service "in sufficient volume to justify such expenditures."

Mr. Brand concluded: "It has been said that the proposed legislation is the natural evolution of progress. Certainly the railroads are not against progress, nor are they opposed to providing the public with improved service. However, unless the transportation of mail is viewed comprehensively in the interest of the country as a whole, rather than with special regard for metropolitan areas, the inevitable outcome of this 'progress' will be the impairment of railroad mail transportation service to a substantial proportion of the public."

Explaining Working Rules Issue to Employees—an Editorial

The effort of the railroads to modernize some of the more onerous working rules has been inaccurately labeled a "smear campaign" against employees by several union leaders. It is, of course, no such thing. Reform of the working rules—to reduce unproductive labor, and time paid for but not worked—is as much in the long-run interest of railroad employees as it is of employers. It is one of the indispensable steps necessary to put a stop to the continued erosion of railroad traffic and jobs.

All railroads are confronted with the problem of explaining this issue to employees—temperately but resolutely. For example, herewith is the firm, friendly and wholly accurate statement of the essentials of the issue—as made by President Wayne A. Johnston of the Illinois Central in the August issue of that company's employee magazine:

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The word "featherbedding" is very much in the news these days. Unfortunately, the word seems to be generating more heat than light. To management people it means outdated work rules that prevent railroads from competing effectively for business. To labor people the same word is a challenge to rights which unions have won through bargaining.

It would be foolish to say that elimination of outdated work rules in itself will mean railroad prosperity. There are other important changes that need to be made too—a wholesale change in government regulation, greater freedom to price rail services, a sharp cut in subsidy to competitors of the railroads, and other corrections in the spirit of the Transportation Act of 1958. But certainly one of the necessary steps to economic health for the railroads is the elimination of wasteful work practices.

Some of the rules under question are as outmoded as hand shoveling of a steam locomotive or manual lifting of a rail. There are some operating rules that economically are wicked—wicked because they increase the cost of transportation without increasing productivity. These outdated rules are one of the reasons why railroads have lost ground to trucks, barges and airplanes. Rail employment has been dropping because trains are carrying a smaller and smaller proportion of the traffic of the nation.

Some labor leaders say railroads are engaged in a "smear campaign" against employees. This is not true. There is no finer group of employees in the country than railroaders, most of whom are union members. Railroaders are willing to put in a good day's work for a good day's pay, but under certain conditions today, some rail employees get a good day's pay for less than a good day's work.

Specifically, the 100 mile basic day rule in through freight service (150 miles in passenger service) is outdated. It may have been a reasonable rule in 1919 when trains moved at less than half the speed they do today, but it is not a reasonable rule today. The same thing can be said about the fireman, whose historic duties now are outdated. There are some bad rules in connection with craft lines, although some organizations have taken steps to overcome some of the abuses. There are other rules that make a railroad pay a full day's wages for a few minutes work. All these outdated rules have little reason for remaining in effect today.

Work rules under which little or no work is done hurt the railroads and most of their employees. Both labor and management have their problems but each must recognize the wisdom of working together for the common good of both the railroads and their employees. The sooner outmoded work rules are brought up to date, the sooner the Illinois Central and all railroads will move ahead to increased profits and increased employment.

B&A to Quit Local Service?

The Boston & Albany on July 31 asked the Massachusetts Public Utilities Department for permission to discontinue local passenger service (including the handling of commuters) between Boston and Springfield, Mass. The road's plan means, in substance, the abandonment of all its passenger service—expect three through trains in each direction, which would stop at only such cities as Framingham, Worcester, Springfield and Pittsfield. The road explained that this service is losing heavily and it cannot expect New England shippers to pay the deficits of a lightly used passenger service.

The road recently sold its Highland branch in the Boston area to the Metropolitan Transit Authority, which is now operating it as a rapid transit line. This line has, reportedly, drained a lot of commuter traffic away from the B&A main line, on which the road now wishes to discontinue local service. The B&A has also lost heavily in through passenger volume to the cross-state Turnpike, which parallels the railroad.

Southworth Lancaster—former railroader and college teacher at Boston—is Railway Age's unofficial observer and commentator on commuter developments in the Boston area (e.g., the "Commuter Laboratory" report, RA, July 20, p. 55). Mr. Lancaster foresees that B&A may withdraw from South Station, Boston, since its few remaining trains could easily be handled from Trinity Place station. He also reports unconfirmed assertions that some of the train curtailments in the Boston area could have been avoided by concessions on the part of the unions —which local groups would have agreed to if "higher-ups" had consented.

CPR Auto Carriers Versatile

Canadian Pacific has come up with two new auto carriers designed to make money coming and going.

- A CPR subsidiary—Smith Transport—has successfully tested a 40-ft piggyback trailer that will haul new autos west, then pick up merchandise freight for the return trip.

- CPR is now putting into service 500 50½-ft box cars that will serve the same dual purpose. They'll carry autos west, and come back with revenue loads of plywood, lumber or grain.

The new dual-purpose piggyback trailer is called Car-a-Van. Two have been built by Strick for Smith Transport, and the CPR subsidiary—after nearly a year of successful tests on runs of 200 to 300 miles—now plans to buy more. Cost: $12,000 apiece.

The Car-a-Van was demonstrated to Canadian and U. S. railroad officers late in July at CPR's John Street Yard in Toronto. The vans hold four standard autos stacked in double tiers. A built-in hydraulic lift raises the autos to the second level.

A CPR piggyback spokesman says the road has high hopes that the Car-a-Van will bring back to the rails much new-auto traffic now moving over the highways.

Delivery of the 500 dual-purpose box cars, built by Canadian Car Co., was due to be completed last week.

Main feature of the new cars, says CPR, is the door arrangement. Besides sliding doors, the cars have staggered plug-type doors, which fit flush into the framework of the car or can be slid away to allow an extended door opening of 16 ft—1 ft larger than the old-type car permits. The combination of doors permits the cars to carry bulk lading shipments on east-bound trips.

The cars are suitable for use on grain unloaders. New attachments were designed to hold the two 2,560-lb automobile racks inside the roof of the cars during the tilting operation.

All of the cars are equipped with Evans G2 automobile loaders. The G2 rack has full length wheel pans so it can take automobiles with a very low clearance. The cars are designed to hold four U. S. or Canadian autos. Two are placed on the racks and two on the car floor.

"The car we have built definitely constitutes a new concept," a Canadian Car spokesman said, "but the features are not really new; 50-ft box cars have been built before, other cars have 16-ft wide door openings, type G racks are being used in the U. S.; neither sliding doors nor plug-type doors are new. However, this is the first time these features have been combined to make one multi-purpose car."

Minority Alleghany, NYC Stockholders Sue ICC

Minority stockholders of the New York Central and Alleghany Corporation have filed suit seeking a federal-court order requiring the ICC to investigate Alleghany's acquisition of control of NYC in 1954. The suit was filed in the U.S. district court for the District of Columbia.

It names as defendants all present members of the ICC and former commissioner Richard F. Mitchell, who retired June 15. Plaintiffs, all of New York City, are Frank Robert Lowing and Delia Smith Lowing, minority stockholders of NYC, and Myron Neisloss and Randolph Phillips, minority stockholders of Alleghany.

The complaint assails the Commission's ruling that the Central System was a single carrier and that Alleghany thus was not acquired to obtain Commission approval for its acquisition.

The complaint is based in part on contentions that the ICC failed to rule on the acquisition of control of NYC by the late Robert R. Young and Allan P. Kirby because of "undue and improper influence." In its undertaking to support these contentions, the complaint makes several specific charges, including this: "The White House, through Mr. Sherman Adams [former assistant to the President], made clear to one or more of the commissioners that it did not want an investigation of Alleghany."

'Springfield Special' Trial Doesn't Work Out

Illinois Central's "Springfield Special" made its last run Aug. 2, ending a nine-month experiment that didn't work out.

The train, operating between Chicago and the Illinois state capital, was placed on the timetable last October, following consolidation of IC's Chicago-St. Louis service. During the trial period in which the train was in service, losses amounted to $82,000. Despite operational economies, revenues from passengers failed to cover even out-of-pocket operating costs, according to B. J. Grenrood, IC passenger traffic manager.

Mr. Grenrood also noted that while a "trial experience" for a passenger train is usually considered to be 60 to 90 days, IC operated the "Special" for a full nine months "in order to give it every opportunity to develop."

Express Incentive Rates Filed

The Railway Express Agency is extending its incentive-rate program in a bid to recapture traffic lost to its biggest competitor—parcel post.

Tariffs filed with the ICC offer substantial savings on small shipments of certain commodities when picked up in bulk lots of 300 lb or more. The shipments may then be consigned to any number of different destinations.

According to REA President William B. Johnson, the reduced rates, which are to become effective Sept. 8, are an extension of similar incentive rates pioneered by the Agency in 1959.

The new rates apply to abrasives and tape; athletic, gymnastic and sporting goods; farm implements and parts; greeting cards; rugs and carpets; tufted textile products; and typewriters and parts—all moving from origin points specified in the tariffs to all express offices in the nation.

Incentive rates already apply to deodorants, disinfectants and insectides; drugs, medicines and toilet preparations; academic caps, gowns and hoods, choir and pulpit robes, and nurses' caps; wearing apparel; electric tools and accessories; surgical and medical instruments and supplies or parts; biological products and laboratory equipment; and book matches.

Mr. Johnson said a chief beneficiary of the new rates will be the small shipper.

"Conventional commodity volume rates have been in effect in express tariffs for nearly 25 years," he said. "The incentive rates, however, give the businessman who ships in small quantities to individual customers the opportunity to take advantage of a quantity rate comparable to that which the large volume shipper already has to a great extent."

He said that, on some of the commodities covered by the new rates, other origin points will be added where traffic studies and shipper interest indicate that they will be justified by increased volume. Other commodities are also being studied.

The incentive rates are based on the aggregate weight—300 lb or more—of prepaid individual shipments of the specified commodities picked up from a shipper at one address at one time.

There are three weight brackets, each providing successively lower rates on each shipment in the bulk lot tendered by the shipper, 300 to 1,499 lb, 1,500 to 2,499 lb, and 2,500 lb and over.

In a table released by REA, a typical application of the rates to 10 small shipments aggregating 325 lb, and moving from New York to 10 different destinations throughout the nation, shows savings of 37.1% over the otherwise applicable express first-class rates. The first-class charges on the 10 shipments thus tendered in aggregate at origin would be $58.83, whereas the charges under the incentive rates would be only $37, a saving of $21.83. If included in a bulk lot under the two higher weight brackets, the savings on the 10 shipments would be 41% and 44.8%, respectively.

Mr. Johnson called the rates "representative of the dynamic changes shippers can expect increasingly from Railway Express in the future."

In upholding previous REA incentive rates, the ICC noted that "the quantity rates afford substantial benefits to industries which are required to make small shipments, and that the adjustment fills a distinct need in affording dependable comprehensive service at rates that they consider reasonable."

The ICC also said that the incentive program provided "a desirable service at a level of charges which is necessary primarily to meet the competition of parcel post."

As the Publisher Sees It

While the railroads vigorously face up to their many challenges, their overall economic well-being lags. Is this a management failure? I don't think so. Men heading the U. S. railroads today are top-drawer. Their backgrounds vary and their records are good. So look at the second team. On one road I can think of with more troubles than most, their middle-management group and top supervisors are able, well trained and enthusiastic. Outstanding by common measures!

So maybe the difficulty is not one of management, but organization—the internal structure. Is it too rigid to let its talent function, to apply its skill and imagination? The organization chart looks just like it did when L. F. Loree wrote "Railroad Freight Transportation" three decades ago; still comparable to the military. But its primary requirement has long since shifted from one of just operating excellence to that of dire need for development of profitable traffic.

One railroad man, a student of the problem with plenty of experience, thinks railroads should be reorganized into marketing functions, each equal in authority—even if a department is a small one—and responsible for its own success. Freight that's part of industry's production line—i.e., bulk freight and regular interplant movements, like automobile parts—would be one department. The freight that represents industry's wholesale distribution, another. The freight of retail distribution, like LCL, express and mail, a third, and passenger a fourth. Commuter traffic, so different from the rest, still another.

The operating department would become a service department, selling transportation to the marketing department at cost.

These departments would be as separate as, for example, divisions of a big chemical company, each responsible for its contribution to the whole. It might even mean leasing a department's service to other operators, like freight forwarders, or municipal authorities, or whatever. The fact that the multiple functions of these departments are performed on a single plant presents no obstacles—any more than the fact that many products of the chemical companies come from the same factory.

Fine food for thought. Recent extensive reorganizations that have been purely geographical adjustments to the traditional organization may have cut costs and increased efficiency, but what have they done to increase input at the cash register?

Robert S. Lewis

Freight Operating Statistics of Large Railroads—Selected Items

Region, Road and Year		Miles of road operated	Train miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (thousands)	Car Miles: Per cent loaded	Ton-miles (thousands): Gross excl.locos & tenders	Ton-miles (thousands): Net rev. and non-rev	Road-locos. on lines: Serviceable: Unstored	Road-locos. on lines: Serviceable: Stored	Road-locos. on lines: B.O.	Road-locos. on lines: Per cent B.O.
New Eng. Region													
Boston & Maine	1959	1,559	223,154	223,516	4,053	8,643	62.3	606,974	243,926	75	4	30	27.5
	1958	1,559	222,138	222,552	3,520	8,210	59.3	587,495	225,386	61	18	8	9.2
N. Y., N. H. & Htfd	1959	1,739	248,020	248,020	14,084	10,305	62.6	691,739	281,706	63	..	16	20.3
	1958	1,739	246,817	246,817	12,775	9,673	59.2	674,579	261,995	72	3	11	12.8
Great Lakes Region													
Delaware & Hudson	1959	764	160,229	162,058	2,063	8,066	66.9	564,885	286,021	39	..	4	9.3
	1958	764	145,310	146,669	1,360	7,376	62.3	524,237	250,333	35	3	4	9.5
Del., Lack. & Western	1959	918	230,956	236,470	11,215	10,197	65.5	703,234	296,368	55	..	6	9.8
	1958	927	226,008	229,998	9,017	10,045	62.9	681,382	270,764	56	..	6	9.7
Erie	1959	2,201	559,689	561,916	12,821	29,923	66.2	1,965,346	781,781	169	3	2	1.1
	1958	2,207	485,500	488,126	9,961	27,019	64.8	1,728,228	649,538	160	10	3	1.7
Grand Trunk Western	1959	951	228,409	229,243	1,583	6,869	58.0	542,990	210,625	40	9	25	33.8
	1958	951	198,101	198,580	1,331	6,862	59.0	488,706	183,425	41	19	16	21.1
Lehigh Valley	1959	1,116	196,883	199,135	3,896	8,807	65.1	606,113	274,821	29	..	5	14.7
	1958	1,118	192,506	194,853	3,044	8,104	62.3	570,757	252,574	29	..	5	14.7
New York Central	1959	10,391	2,076,518	2,087,980	89,802	91,551	59.5	7,085,168	3,058,033	412	..	50	10.8
	1958	10,470	1,965,033	1,976,646	84,512	77,126	54.1	5,928,539	2,470,052	403	32	29	6.3
New York, Chic. & St. L.	1959	2,155	625,858	625,858	4,500	28,763	63.2	2,092,858	919,404	103	30	5	3.6
	1958	2,155	555,802	562,669	4,322	24,495	59.8	1,780,533	724,516	126	23	4	2.6
Pitts. & Lake Erie	1959	221	58,276	58,276	....	2,615	65.6	239,285	142,731	14	..	1	6.7
	1958	221	52,129	52,129	....	1,951	60.6	180,735	109,838	12	..	5	29.4
Wabash	1959	2,379	508,364	509,256	4,191	21,957	62.9	1,524,203	603,206	111	..	3	2.6
	1958	2,379	443,010	443,016	3,700	18,763	60.7	1,333,832	516,350	116	..	1	.9
Central Eastern Region													
Baltimore & Ohio	1959	5,802	1,336,882	1,432,594	95,246	62,116	60.9	4,811,245	2,341,815	385	60	28	5.9
	1958	5,830	1,225,365	1,301,316	77,032	52,294	58.8	4,196,744	1,969,704	400	111	33	6.1
Bessemer & Lake Erie	1959	203	66,039	70,588	204	3,364	62.3	394,275	257,789	16	..	..	..
	1958	208	30,204	31,296	46	1,054	65.7	115,199	74,391	10	4	..	..
Central RR Co. of New Jersey	1959	597	114,435	115,827	6,024	4,331	64.8	334,150	176,598	64	..	6	8.6
	1958	600	102,027	103,239	5,084	3,856	61.7	297,225	152,579	66	1	3	4.3
Chicago & Eastern Ill.	1959	863	112,695	112,695	2,114	5,567	62.6	432,362	215,524	25	..	7	21.9
	1958	863	133,689	133,689	2,974	4,948	60.7	386,877	188,117	26	..	4	13.3
Elgin, Joliet & Eastern	1959	205	69,422	70,028	....	2,429	61.8	201,837	108,826	44	..	..	..
	1958	236	62,677	62,933	....	1,926	60.4	158,836	84,151	31	8	4	9.3
Pennsylvania System	1959	9,865	2,831,198	2,974,409	185,869	122,750	63.4	9,245,332	4,377,536	709	..	86	10.8
	1958	9,900	2,455,237	2,569,023	144,589	103,198	60.2	7,781,787	3,469,593	666	102	78	9.2
Reading	1959	1,302	299,566	301,121	10,629	11,531	61.8	978,633	523,064	150	4	13	7.8
	1958	1,303	255,785	257,848	7,842	9,522	56.5	824,033	413,232	129	13	46	24.5
Western Maryland	1959	844	153,934	160,668	9,488	6,929	66.0	606,522	350,595	36	..	1	2.7
	1958	844	135,224	137,940	5,432	5,180	60.1	455,681	254,411	39	5	1	2.2
Pocahontas Region													
Chesapeake & Ohio	1959	5,061	1,166,606	1,169,158	21,494	58,652	56.8	5,169,336	2,902,195	606	6	27	4.2
	1958	5,066	1,120,529	1,124,453	21,146	52,271	55.3	4,672,417	2,557,492	603	18	14	2.2
Norfolk & Western	1959	2,116	617,256	638,934	33,575	33,887	56.7	3,276,482	1,800,720	159	19	11	5.8
	1958	2,109	587,125	625,261	45,209	29,845	55.2	2,895,321	1,565,028	183	68	8	3.1
Rich., Fred. & Potomac	1959	110	41,434	41,434	864	2,699	65.4	177,502	70,969	11	4	..	..
	1958	110	40,486	40,486	790	2,514	57.1	174,432	62,224	9	5	1	6.7
Virginian	1959	608	139,299	141,429	3,350	7,027	52.8	686,688	383,676	53	11	13	16.9
	1958	608	146,107	148,147	3,431	7,416	51.7	736,081	407,695	51	14	15	18.8
Southern Region													
Atlantic Coast Line	1959	5,290	707,278	707,278	7,097	26,946	57.9	2,099,308	961,339	121	..	1	.8
	1958	5,282	691,087	691,087	6,904	23,410	53.9	1,856,292	795,411	110	15	3	2.3
Central of Georgia	1959	1,712	199,113	199,113	2,079	8,159	65.1	621,895	309,243	35	..	1	2.8
	1958	1,730	194,348	194,348	1,910	7,340	61.6	569,690	270,889	33	..	2	5.7
Florida East Coast	1959	572	113,358	113,358	....	3,625	54.5	276,973	96,037	51	..	3	5.6
	1958	571	139,778	139,778	6	4,425	53.7	345,161	115,557	54	..	4	6.9
Gulf, Mobile & Ohio	1959	2,717	264,115	264,115	105	15,302	66.9	1,087,230	524,401	87	..	4	4.4
	1958	2,717	262,934	262,934	77	13,733	64.2	906,051	449,711	87	..	4	4.4
Illinois Central	1959	6,439	1,032,579	1,032,579	28,127	46,223	61.3	3,413,319	1,565,563	189	29	159	42.2
	1958	6,497	963,295	963,295	26,684	41,378	59.5	3,059,731	1,360,657	204	78	80	22.1
Louisville & Nashville	1959	5,679	900,810	903,072	15,318	37,728	61.9	2,930,646	1,474,301	164	..	2	1.2
	1958	5,680	843,664	844,129	14,597	33,052	57.2	2,620,850	1,257,309	156	..	3	1.9
Seaboard Air Line	1959	4,136	626,129	626,129	1,463	25,474	59.6	2,001,686	926,723	132	..	4	2.9
	1958	4,135	637,947	637,947	1,979	23,262	55.4	1,862,709	809,295	145	..	7	4.6
Southern	1959	6,243	849,896	850,050	9,235	41,758	65.0	2,895,491	1,366,868	198	1	2	1.0
	1958	6,249	790,806	791,080	9,668	36,324	61.8	2,538,387	1,137,967	178	1	14	7.3
Northwestern Region													
Chicago & North Western	1959	9,251	892,781	892,781	9,606	34,248	61.7	2,467,993	1,027,440	163	..	18	9.9
	1958	9,291	790,163	790,163	8,365	29,516	59.2	2,272,584	914,965	164	..	11	6.3
Chicago Great Western	1959	1,437	135,500	135,500	222	7,219	66.2	512,211	241,140	25	..	2	7.4
	1958	1,437	131,225	131,225	222	6,847	64.6	487,204	222,326	28	..	2	6.7
Chic., Milw., St. P. & Pac.	1959	10,583	868,276	877,783	14,305	41,524	64.9	2,900,365	1,316,757	299	8	4	1.3
	1958	10,583	848,677	859,927	14,476	37,690	61.6	2,685,519	1,179,731	279	15	8	2.6
Duluth, Missabe & Iron Range	1959	557	134,484	134,990	539	7,563	50.7	820,410	492,865	68	20	4	4.3
	1958	559	58,297	58,393	236	2,503	52.6	270,714	164,465	65	30	7	6.9
Great Northern	1959	8,281	1,000,837	1,005,178	23,810	44,978	62.3	3,433,193	1,637,085	288	..	4	1.4
	1958	8,262	862,981	864,677	20,728	37,266	65.4	2,675,876	1,251,310	255	19	1	.4
Minneap., St. P. & S. St. Marie	1959	4,169	363,907	364,997	767	13,762	64.9	954,151	438,334	88	8	3	3.0
	1958	4,169	352,149	352,895	822	12,205	65.1	832,290	363,316	85	11	4	4.0
Northern Pacific	1959	6,533	780,990	787,768	13,285	35,724	70.1	2,392,193	1,119,805	237	5	3	1.2
	1958	6,533	715,447	724,240	9,176	31,855	64.4	2,217,566	984,978	206	15	3	1.3
Spokane, Portland & Seattle	1959	935	146,845	146,845	1,430	6,586	76.3	469,049	231,530	54	..	1	1.8
	1958	944	127,945	127,945	1,162	5,735	76.4	371,174	180,229	57	..	..	..
Central Western Region													
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1959	13,084	2,875,971	3,042,773	69,878	123,091	60.7	9,157,217	3,485,332	602	..	16	2.6
	1958	13,097	2,175,953	2,314,774	46,814	105,358	62.1	7,536,024	2,810,952	548	33	103	15.1
Chic., Burl. & Quincy	1959	8,652	1,071,035	1,068,279	26,659	46,320	66.5	3,172,993	1,424,345	136	9	73	33.5
	1958	8,698	963,186	959,528	21,853	41,849	63.0	2,893,363	1,232,869	132	30	63	28.0
Chic., Rock I. & Pac.	1959	7,520	1,053,627	1,052,491	2,204	42,159	61.9	3,053,526	1,265,817	187	..	9	4.6
	1958	7,567	896,331	892,268	2,420	35,625	58.9	2,681,543	1,073,894	174	7	5	2.7
Denver & R. G. Wn.	1959	2,128	313,062	332,157	29,933	14,954	71.6	1,060,355	520,368	82	8	7	7.2
	1958	2,155	249,178	264,942	21,615	12,956	72.9	879,403	426,763	79	15	5	5.1
Southern Pacific	1959	8,011	2,345,937	2,436,809	144,536	110,512	64.3	7,829,913	3,269,267	717	3	22	3.0
	1958	8,034	1,983,545	2,067,023	107,135	93,874	62.9	6,654,088	2,690,089	653	51	63	8.2
Union Pacific	1959	9,743	2,196,398	2,215,528	48,836	103,604	66.2	7,030,536	3,016,176	320	27	103	22.9
	1958	9,753	1,881,815	1,919,502	59,679	92,430	64.5	6,304,213	2,614,029	313	89	91	18.5
Western Pacific	1959	1,189	272,439	283,224	21,649	11,374	69.2	767,365	343,121	45	..	1	2.2
	1958	1,189	217,212	227,134	25,134	9,810	68.5	666,090	299,966	44	..	3	6.4
Southwestern Region													
Kansas City Southern	1959	886	133,473	133,489	15	8,764	67.2	650,640	307,600	22	..	1	4.3
	1958	886	120,753	120,753	117	7,473	63.8	557,582	249,292	23	..	1	4.2
Louisiana & Arkansas	1959	746	83,776	83,776	....	3,794	65.1	292,312	138,207	20	..	..	..
	1958	746	76,153	76,153	53	3,614	60.5	293,270	135,038	18	..	..	..
Mo.-Kans.-Texas Lines	1959	2,916	214,834	214,834	2,102	11,151	63.8	821,684	374,841	59	..	4	6.3
	1958	3,059	221,705	221,705	2,103	10,477	61.5	734,912	327,262	78	..	1	1.3
Missouri Pacific	1959	9,440	1,215,955	1,215,955	8,873	58,621	64.5	4,213,885	1,904,323	224	6	16	6.5
	1958	9,529	1,140,089	1,140,089	8,945	51,326	61.4	3,730,079	1,622,988	210	14	19	7.8
St. Louis-San Francisco	1959	4,528	593,479	593,479	5,736	24,490	67.6	1,677,383	791,389	105	..	11	9.5
	1958	4,558	526,079	526,079	5,137	21,003	64.7	1,442,603	648,244	89	..	13	12.7
St. Louis Southw. Lines	1959	1,554	352,221	352,221	4,355	16,655	70.0	1,070,059	478,331	48	..	..	..
	1958	1,554	314,990	315,000	1,538	14,002	64.6	926,768	414,278	54	..	1	1.8
Texas & New Orleans	1959	4,148	674,595	674,595	469	30,220	64.9	2,128,246	974,837	139	..	..	..
	1958	4,271	605,357	605,357	731	26,471	60.2	1,929,759	822,870	140	..	3	2.1
Texas & Pacific	1959	1,822	295,160	295,160	2,767	13,598	65.6	983,858	392,136	36	..	2	5.3
	1958	1,822	246,209	246,209	2,469	12,067	60.8	878,627	336,936	40	3	3	7.0

For the Month of May 1959 Compared with May 1958

Region, Road and Year		Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. exc.locos and tenders	G.t.m.per train-mi. excl.locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Cars-miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine 1959	2,125	7,817	9,942	3.2	44,247	2,728	1,096	28.2	819	46.6	5,047	16.3	76.6
	1958	3,440	6,516	9,956	3.5	42,643	2,651	1,017	27.5	707	43.4	4,664	16.1	96.5
	N. Y., N. H. & Htfd 1959	2,941	12,934	15,875	5.6	43,773	2,789	1,136	27.3	547	32.0	5,226	15.7	126.4
	1958	4,231	10,076	14,307	4.7	47,150	2,733	1,061	27.1	575	35.9	4,860	17.3	116.6
Great Lakes Region	Delaware & Hudson 1959	2,894	5,174	8,068	8.0	66,575	3,547	1,796	35.5	1,033	43.6	12,077	18.9	135.0
	1958	7,623	4,969	12,592	4.7	64,474	3,628	1,733	33.9	645	30.5	10,570	17.9	126.5
	Del., Lack. & Western 1959	5,130	8,997	14,127	11.1	54,790	3,086	1,300	29.1	682	35.9	10,414	18.0	143.4
	1958	7,520	6,804	14,324	8.3	54,074	3,054	1,214	27.0	592	35.0	9,422	17.9	139.5
	Erie 1959	10,326	15,999	26,325	6.9	74,417	3,542	1,409	26.1	976	56.5	11,458	21.2	118.4
	1958	13,597	12,408	26,005	5.7	72,481	3,590	1,349	24.0	804	51.6	9,494	20.4	104.2
	Grand Trunk Western 1959	5,033	8,055	13,088	6.3	54,256	2,390	927	30.7	494	27.7	7,144	22.8	104.3
	1958	6,609	6,082	12,691	5.4	56,407	2,483	932	26.7	474	30.1	6,222	22.9	89.2
	Lehigh Valley 1959	5,671	8,202	13,873	9.9	65,497	3,102	1,407	31.2	619	30.5	7,944	21.3	214.1
	1958	8,133	7,775	15,908	11.0	64,383	2,988	1,322	31.2	531	27.4	7,288	21.7	206.7
	New York Central 1959	61,171	75,271	136,442	7.7	60,850	3,445	1,487	33.4	743	37.4	9,493	17.8	166.5
	1958	84,013	62,037	146,050	6.7	55,444	3,043	1,268	32.0	551	31.8	7,610	18.4	154.9
	New York, Chic. & St. L. 1959	8,515	15,175	23,690	13.2	61,064	3,390	1,489	32.0	1,232	60.9	13,763	18.3	163.7
	1958	13,131	9,490	22,621	11.9	62,083	3,231	1,315	29.6	1,015	57.4	10,845	19.4	134.0
	Pitts. & Lake Erie 1959	4,743	7,003	11,746	8.8	63,741	4,122	2,459	54.6	371	10.4	20,834	15.5	135.2
	1958	10,417	3,000	13,417	5.6	59,199	3,471	2,109	56.3	266	7.8	16,032	17.1	111.9
	Wabash 1959	9,730	7,532	17,262	8.3	75,587	3,013	1,193	27.5	1,115	64.5	8,179	25.2	154.0
	1958	10,858	8,596	19,454	5.8	65,845	3,023	1,170	27.5	850	50.9	7,001	21.9	130.1
Central Eastern Region	Baltimore & Ohio 1959	58,775	34,830	93,605	17.5	58,397	3,653	1,778	37.7	791	34.5	13,020	16.2	106.0
	1958	70,344	32,670	103,014	17.4	57,034	3,467	1,627	37.7	626	28.3	10,899	16.7	86.1
	Bessemer & Lake Erie 1959	4,711	1,621	6,332	7.8	95,397	6,225	4,070	76.6	1,199	25.1	40,964	16.0	166.6
	1958	8,435	419	8,854	8.7	67,645	4,007	2,588	70.6	256	5.5	11,537	17.7	79.9
	Central RR Co. of New Jersey 1959	3,336	10,727	14,063	15.4	42,567	3,054	1,614	40.8	409	15.5	9,542	14.6	83.8
	1958	4,882	7,928	12,810	14.7	42,717	3,052	1,567	39.6	396	16.2	8,203	14.7	74.9
	Chicago & Eastern Ill. 1959	2,850	2,858	5,708	18.2	67,662	3,862	1,925	38.7	1,152	47.5	8,056	17.6	121.0
	1958	3,201	2,546	5,747	18.4	59,437	2,917	1,418	38.0	1,038	45.0	7,032	20.5	150.9
	Elgin, Joliet & Eastern 1959	7,994	8,840	16,834	4.5	20,870	3,003	1,619	44.8	212	7.6	17,124	7.2	69.7
	1958	8,243	4,072	12,315	6.5	22,937	2,659	1,409	43.7	218	8.3	11,502	9.1	64.4
	Pennsylvania System 1959	123,551	73,636	197,187	18.0	57,384	3,376	1,599	35.7	717	31.7	14,314	17.6	140.4
	1958	129,960	63,907	193,867	14.0	58,294	3,242	1,445	33.6	580	28.7	11,305	18.4	106.3
	Reading 1959	15,015	18,004	33,019	20.3	50,424	3,269	1,747	45.4	496	17.7	12,959	15.4	69.5
	1958	21,953	13,032	34,985	14.5	51,473	3,222	1,616	43.4	378	15.4	10,230	16.0	55.6
	Western Maryland 1959	5,787	3,498	9,285	5.8	59,393	3,997	2,310	50.6	1,197	35.8	13,400	15.1	146.8
	1958	9,979	1,715	11,694	3.1	50,324	3,439	1,920	49.1	682	23.1	9,724	14.9	114.3
Pocahontas Region	Chesapeake & Ohio 1959	57,843	29,984	87,827	7.3	82,061	4,451	2,499	49.5	1,072	38.2	18,498	18.5	65.4
	1958	75,283	23,580	98,863	3.2	82,233	4,191	2,294	48.9	846	31.3	16,285	19.7	62.7
	Norfolk & Western 1959	34,572	8,204	42,776	2.7	98,455	5,432	2,986	53.1	1,291	42.8	27,452	18.5	126.9
	1958	50,384	6,809	57,193	2.0	90,076	5,044	2,726	52.4	875	30.3	23,938	18.3	91.0
	Rich., Fred. & Potomac 1959	87	1,036	1,123	2.1	100,911	4,289	1,715	26.3	2,068	120.4	20,812	23.6	94.6
	1958	145	973	1,118	1.9	92,783	4,313	1,539	24.8	1,932	136.7	18,248	21.5	92.2
	Virginian 1959	10,712	1,110	11,822	3.6	75,130	5,016	2,803	54.6	991	34.4	20,356	15.2	67.7
	1958	14,074	1,209	15,283	3.1	76,041	5,139	2,846	55.0	861	30.3	21,631	15.1	67.5
Southern Region	Atlantic Coast Line 1959	19,539	17,302	36,841	4.4	51,451	2,984	1,366	35.7	847	41.0	5,862	17.3	211.1
	1958	24,653	13,742	38,395	3.4	48,897	2,699	1,156	34.0	675	36.9	4,858	18.2	196.4
	Central of Georgia 1959	3,319	5,567	8,886	3.1	53,890	3,126	1,554	37.9	1,095	44.4	5,827	17.3	200.2
	1958	4,890	3,815	8,705	.2	52,294	2,938	1,397	36.9	1,011	44.5	5,051	17.8	193.0
	Florida East Coast 1959	566	3,651	4,217	.4	42,513	2,453	851	26.5	627	43.5	5,416	17.4	76.3
	1958	821	4,034	4,855	.8	41,223	2,485	832	26.1	682	48.7	6,528	16.7	92.3
	Gulf, Mobile & Ohio 1959	6,549	10,603	17,152	5.0	77,147	4,118	1,986	34.3	1,003	43.7	6,226	18.7	101.7
	1958	7,892	8,885	16,777	7.9	72,770	3,652	1,711	32.7	869	41.3	5,339	19.9	100.4
	Illinois Central 1959	24,837	20,678	45,515	4.6	62,766	3,332	1,528	33.9	1,066	51.3	7,843	19.0	97.6
	1958	31,413	16,315	47,728	3.1	57,468	3,202	1,242	32.9	902	46.1	6,756	18.1	94.1
	Louisville & Nashville 1959	33,655	19,487	53,142	7.5	56,545	3,261	1,640	39.1	907	37.5	8,374	17.4	198.2
	1958	43,747	14,109	57,856	5.5	53,440	3,115	1,495	38.0	701	32.2	7,141	17.2	194.1
	Seaboard Air Line 1959	17,175	12,898	30,073	3.2	60,630	3,257	1,508	36.4	996	45.9	7,228	19.0	177.4
	1958	19,183	10,684	29,867	3.0	56,456	2,971	1,291	34.8	870	45.1	6,313	19.3	154.9
	Southern 1959	19,652	27,808	47,460	4.7	60,845	3,414	1,612	32.7	927	43.5	7,063	17.9	151.9
	1958	23,181	26,385	49,566	4.3	54,138	3,220	1,444	31.3	754	39.0	5,874	16.9	146.9
Northwestern Region	Chicago & North Western 1959	21,303	25,455	46,758	5.4	52,462	2,771	1,154	30.0	712	38.5	3,583	19.0	172.9
	1958	25,454	21,923	47,377	5.6	52,528	2,887	1,162	31.0	618	33.7	3,177	18.3	158.0
	Chicago Great Western 1959	2,289	4,168	6,457	3.5	72,809	3,786	1,782	33.4	1,120	55.1	5,413	19.3	174.1
	1958	2,600	3,914	6,514	3.5	70,101	3,722	1,699	32.5	1,080	51.5	4,991	18.9	151.5
	Chic., Milw., St. P. & Pac. 1959	28,951	25,068	54,019	3.7	67,576	3,350	1,521	31.7	796	38.7	4,014	20.2	101.5
	1958	39,576	19,999	59,575	5.5	62,316	3,169	1,392	31.3	633	32.9	3,596	19.7	101.0
	Duluth, Missabe & Iron Range 1959	11,822	868	12,690	3.2	112,323	6,561	3,941	65.2	1,182	35.8	28,544	18.4	58.2
	1958	14,492	720	15,212	4.4	75,429	4,920	2,989	65.7	349	10.1	9,491	16.2	18.3
	Great Northern 1959	23,081	19,479	42,560	3.3	66,599	3,484	1,661	36.4	1,227	54.1	6,377	19.4	125.5
	1958	27,714	14,528	42,242	3.7	61,307	3,131	1,464	33.6	970	44.2	4,886	19.8	120.5
	Minneap., St. P. & S. St. Marie 1959	6,892	6,503	13,395	7.1	52,191	2,639	1,213	31.9	1,057	51.1	3,392	19.9	131.4
	1958	8,043	6,230	14,273	4.9	52,103	2,368	1,034	29.8	836	43.2	2,811	22.0	128.5
	Northern Pacific 1959	18,464	15,874	34,338	2.9	65,691	3,065	1,435	31.3	1,056	48.1	5,529	21.4	112.4
	1958	21,299	12,649	33,948	4.6	65,508	3,103	1,378	30.9	940	47.2	4,864	21.1	111.7
	Spokane, Portland & Seattle 1959	1,293	3,862	5,155	2.6	46,349	3,204	1,582	35.2	1,400	52.2	7,988	14.5	97.0
	1958	1,663	3,499	5,162	3.3	43,931	2,915	1,415	31.4	1,154	48.1	6,159	15.1	85.0
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) 1959	52,097	39,367	91,464	3.8	78,570	3,193	1,215	28.3	1,277	74.4	8,593	24.7	163.8
	1958	63,621	30,259	93,880	5.9	80,582	3,472	1,295	26.7	988	59.6	6,923	23.3	119.9
	Chic., Burl. & Quincy 1959	22,434	21,245	43,679	3.3	65,493	2,973	1,335	30.8	1,042	51.0	5,311	22.1	164.4
	1958	24,859	15,609	40,468	4.1	64,596	3,012	1,283	29.5	943	50.8	4,572	21.5	148.4
	Chic., Rock I. & Pac. 1959	15,154	24,037	39,191	4.9	62,189	2,904	1,204	30.0	1,093	58.8	5,430	21.5	185.9
	1958	18,974	21,319	40,293	4.5	63,965	3,001	1,202	30.1	855	48.1	4,578	21.4	165.9
	Denver & R. G. Wn. 1959	7,665	5,994	13,659	5.8	70,432	3,397	1,667	34.8	1,222	49.1	7,888	20.8	125.5
	1958	8,949	4,869	13,818	6.1	72,762	3,542	1,719	32.9	1,035	43.1	6,388	20.6	99.1
	Southern Pacific 1959	32,553	48,431	80,984	2.1	71,151	3,378	1,410	29.6	1,304	68.6	13,164	21.3	123.4
	1958	35,371	35,676	71,047	2.2	70,538	3,384	1,368	28.7	1,221	67.7	10,801	21.0	100.3
	Union Pacific 1959	32,128	29,620	61,748	1.8	91,738	3,222	1,382	29.1	1,555	80.7	9,986	28.7	161.9
	1958	36,716	25,219	61,935	2.5	89,968	3,368	1,397	28.3	1,350	74.0	8,646	26.9	132.1
	Western Pacific 1959	2,565	3,337	5,902	2.3	78,955	2,825	1,263	30.2	1,873	89.7	9,309	28.0	222.7
	1958	3,021	2,676	5,697	2.6	80,059	3,079	1,387	30.6	1,686	80.5	8,138	26.1	180.2
Southwestern Region	Kansas City Southern 1959	2,397	5,331	7,728	5.3	101,330	4,898	2,316	35.1	1,286	54.5	11,199	20.8	221.8
	1958	2,930	4,612	7,542	4.8	94,314	4,619	2,065	33.4	1,046	49.2	9,076	20.4	168.7
	Louisiana & Arkansas 1959	1,977	3,053	5,030	6.8	70,675	3,490	1,650	36.4	890	37.5	5,976	20.3	178.6
	1958	2,618	2,959	5,577	6.2	73,630	3,853	1,774	37.4	758	33.5	5,839	19.1	174.7
	Mo.-Kans.-Texas Lines 1959	5,452	7,387	12,839	7.5	66,641	3,837	1,750	33.6	977	45.6	4,147	17.4	129.2
	1958	6,823	7,032	13,855	7.9	58,986	3,343	1,489	31.2	787	40.9	3,451	17.8	99.6
	Missouri Pacific 1959	23,432	26,423	49,855	7.7	71,239	3,484	1,575	32.5	1,246	59.4	6,507	20.6	175.5
	1958	26,562	21,223	47,785	7.0	66,458	3,289	1,431	31.6	1,117	57.5	5,494	20.3	169.0
	St. Louis-San Francisco 1959	12,232	11,343	23,575	1.7	59,202	2,835	1,338	32.3	1,125	51.5	5,638	20.9	188.5
	1958	14,755	8,467	23,222	1.7	55,637	2,759	1,240	30.9	914	45.8	4,588	20.3	181.5
	St. Louis Southw. Lines 1959	2,052	5,108	7,160	1.8	75,250	3,046	1,361	28.7	2,220	110.4	9,929	24.8	242.3
	1958	3,046	4,220	7,266	1.3	70,386	2,949	1,318	29.6	1,855	97.1	8,600	23.9	199.8
	Texas & New Orleans 1959	6,038	15,431	21,469	1.6	73,570	3,172	1,453	32.3	1,474	70.4	7,581	23.3	161.7
	1958	7,630	15,217	22,847	1.5	69,306	3,207	1,367	31.1	1,175	62.8	6,215	21.7	146.5
	Texas & Pacific 1959	3,045	6,284	9,329	3.3	78,539	3,350	1,335	28.8	1,401	74.1	6,943	23.6	269.8
	1958	3,896	5,674	9,570	3.1	76,032	3,583	1,374	27.9	1,110	65.4	5,965	21.3	202.4

Compiled by Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

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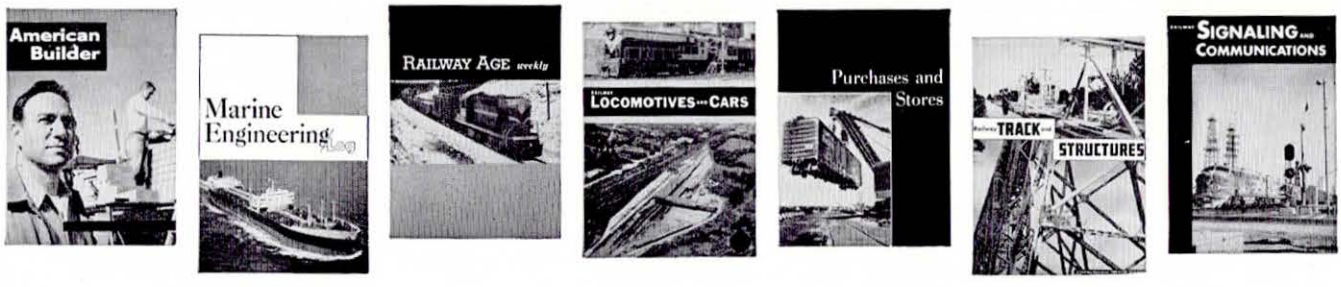

MARKET OUTLOOK *at a glance*

Carloadings Rise 1.5% Above Previous Week's

Loadings of revenue freight in the week ended August 1 totaled 544,464 cars, the Association of American Railroads announced on August 6. This was an increase of 8,034 cars, or 1.5%, compared with the previous week; a decrease of 78,214 cars, or 12.6%, compared with the corresponding week last year; and a decrease of 196,244 cars, or 26.5%, compared with the same 1957 week.

Loadings of revenue freight for the week ended July 25 totaled 536,430 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, July 25

District	1959	1958	1957
Eastern	80,734	89,574	111,405
Allegheny	80,216	99,677	143,177
Pocahontas	47,540	51,877	68,878
Southern	107,413	105,957	116,292
Northwestern	64,243	98,799	124,633
Central Western	108,921	113,004	119,606
Southwestern	47,363	49,177	52,416
Total Western Districts	220,527	260,980	296,655
Total All Roads	536,430	608,065	736,407
Commodities:			
Grain and grain products	53,982	72,269	61,771
Livestock	3,525	3,832	5,535
Coal	99,153	107,053	138,813
Coke	3,370	5,466	11,117
Forest Products	40,667	37,139	41,819
Ore	13,109	56,402	91,550
Merchandise l.c.l.	38,982	43,194	52,759
Miscellaneous	283,642	282,710	333,043
July 25	536,430	608,065	736,407
July 18	585,070	582,244	743,359
July 11	554,426	491,566	692,599
July 4	573,325	460,345	535,334
June 27	697,633	627,185	732,733
Cumulative total, 30 weeks	18,402,763	16,446,336	20,548,095

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended July 25 totaled 7,361 cars, compared with 5,098 for the corresponding 1958 week. Loadings for 1959 up to July 25 totaled 231,271 cars, compared with 143,767 for the corresponding period of 1958.

IN CANADA—Carloadings for the seven-day period ended July 21 totaled 83,385 cars, compared with 81,758 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
July 21, 1959	83,385	22,438
July 21, 1958	80,297	23,747
Cumulative Totals:		
July 21, 1959	2,060,840	792,661
July 21, 1958	2,036,745	800,648

New Equipment

FREIGHT-TRAIN CARS

► *Louisville & Nashville.*—Ordered 150 new DF box cars from Pullman-Standard at a cost of approximately $2,040,000. Delivery will begin late this month, will be completed in September. Forty cars will have 15-ft doors, the remainder 9-ft doors. The road's Louisville, Ky., shops will convert 738 hopper cars from wood to steel sides, adding about 17 years to life expectancy and cutting maintenance costs by about $100 per car per year.

► *Minneapolis & St. Louis.*—Will repair 200 refrigerator cars for Armour & Co., under contract at its Marshalltown, Iowa, shops. The road will employ 65 additional men for the six-month, $450,000 job. Armour previously had two cars repaired by M&StL as a test. Railroad forces will install new roofs, floors, sides and insulation, and paint the cars.

► *Pacific Fruit Express.*—Will build 1,025 multi-purpose 50-ft, 60-ton mechanical refrigerator cars at a cost of approximately $27,000,000. One thousand cars will be equipped with refrigeration units capable of maintaining constant temperatures ranging from zero to 70 deg Fahrenheit for periods of up to 20 days without refueling. Cars will handle all commodities requiring either cold or heat. Twenty-five cars will be designed to handle commodities requiring temperatures between 32 deg and 70 deg. All cars will be equipped with roller bearings, load protection devices and 8-ft doors. Deliveries will start next February, will be completed in October 1960. Several prototypes of the new cars incorporating additional innovations are now in test service and may lead to further design refinements. PFE says "studies may point the way toward a car with increased attraction for shippers of both eastbound perishable loads and return loads of general freight."

► *Western Pacific.*—Ordered 50 50-ft, 70-ton DF insulated box cars from Pullman-Standard at a cost of approximately $750,000. Delivery is scheduled for fourth quarter. WP directors authorized purchase of an additional 50 cars. Orders will probably be placed within the near future.

PASSENGER-TRAIN CARS

► *New York City Transit Authority.*—Has accepted, and will submit to the Board of Estimate for approval, an ACF bid of $11,492,755 to build 100 subway cars. Contract calls for delivery of the first 10 cars within eight months, and 20 a month thereafter. The cars will be paid for with reallocated funds from the authority's 1959 capital budget (RA, July 20, p. 51).

LOCOMOTIVES

► *Tennessee, Alabama & Georgia.*—Ordered one GP-18 1,800-hp road-switcher from Electro-Motive Division for delivery in December.

(Continued on following page)

MARKET OUTLOOK (continued)

New Facilities

► *Canadian National.*—Awarded contracts for construction of a diesel shop in the Moncton hump yard. Ellis-Don Ltd., London, Ont., will build the shop. Structural steel will be supplied by Robb Engineering Works Ltd., Amherst, N. S. Cost of the 263-ft by 340-ft facility will be close to $2,000,000.

► *Cedar Rapids & Iowa City.*—Major projects include installation of additional transfer tracks in Cedar Rapids yard, at an estimated cost of $10,977; and installation of new track turnouts and revision of yard tracks in Iowa City yard, at an estimated cost of $23,708. All work will be performed by company forces. The road also plans to continue its annual cross tie replacement program, calling for replacement of approximately 4,500 ties at a cost of about $18,675.

► *Northern Pacific.*—Will install CTC on 91 miles of single track mainline between Livingston and Park City, Mont. The installation will cost $1,550,000 and is to be completed next year. Control machine is at Glendive, Mont. When completed the NP will have CTC between Park City and Missoula, 331 miles.

► *Sacramento Northern.*—Company forces are progressing a program of replacing or strengthening bridges and providing culverts where required at various points on the system. Estimated cost of the overall project: $33,000.

► *Santa Fe.*—Ordered over 500 sets of two-way radio from Bendix Radio Division of Bendix Aviation Corp. The order includes equipment that will operate on 12 and 72-volt dc and 117-volt ac, to be used on locomotives and cabooses as well as at wayside stations along the Santa Fe's mainline.

► *Western Pacific.*—Will build a three-track diesel shop at Oroville, Calif., at a total cost of $1,200,000. Shop building, 327 ft by 185 ft, will include a 69-ft by 23-ft drop pit, six inspection pits, storeroom and locker room and other necessary repair facilities. Current work, Phase I of a two-year construction program, will cost about $300,000, will be completed in December. Work will be done by company and contract forces. WP also plans improvements, including replacement of gallows frame and aprons, at 25th Street Slip, San Francisco. Work will begin in September, will cost an estimated $59,000.

Maintenance Expenditures

► *Up 8.5% in May.*—Expenditures by Class I roads for maintenance of equipment, way and structures in May 1959 were up about $20.8 million compared to the same month in 1958, according to report of ICC Bureau of Transport Economics and Statistics summarized below:

	May 1959	May 1958.	% Change
Maintenance of Way & Structures	$112,319,563	$104,112,738	+7.9
Maintenance of Equipment	154,510,688	141,876,235	+8.9
Totals	266,830,251	245,988,973	+8.5

Minnesota Approves Truck-Rail Joint Rate

Joint truck-rail rates have passed a significant test in Minnesota—approval by the state railroad and warehouse commission.

The commission, acting on an application by the Minneapolis & St. Louis, authorized establishment of truck-rail rates on all commodities moving in LCL and LTL lots. Approval was granted by a 2-1 vote.

M&StL's application sought authority to set rates between all stations served by Murphy Motor Freight, Inc., and all stations served by M&StL (and subsidiary Minnesota Western) at the truck rate level. The railroad also said it would be willing to join with "any other reputable motor carrier" in setting up joint LCL and LTL rates intrastate.

The immediate result of the commission's action will be a reduction in shipping costs. The truck-rail cooperation is also expected to provide faster small-shipment service.

One example of the rate cuts in prospect: On shipments between Red Wing and Fairfax, Minn., the joint rate will involve a single minimum charge of $3. Previously, a shipper had to pay two rates—a minimum of $2.75 to the trucker and a minimum of $3 to the railroad.

Commissioner R. A. Anderson said he's hopeful that truck-rail interlining will be common throughout the state "before very long."

Responsibility Goes With Profits, Says BRC President

George M. Harrison, president of the Brotherhood of Railway Clerks, admonished businessmen last week not to forget their "social responsibility."

Mr. Harrison said that while profit-making is an accepted element in the free enterprise economy, it "is not our basic and primary national or social objective." Along with the profits, he said, goes the responsibility of "serving the needs of all of the people in every branch of our society."

Business leaders, he suggested, have not always measured up to this responsibility. He was especially critical of:

- "Job displacement . . . through automation; it has been stepped up as part of the employer plan to get more and more production for less and less money."
- "Right-to-work" legislation.

Mr. Harrison made these remarks last Thursday at the Grand Aerie Convention of the Fraternal Order of Eagles, in Toronto, Canada, where he received the Green-Murray Award.

call, and other forms of transport cannot pick up the load."

Referring to predictions that the next war would be over in a few weeks, Mr. Symes said, if that be true, "we are wasting our time and energy on the transportation problem." He went on, however, to note that there are differences of opinion about this, and to warn that "we will certainly not be safe in ignoring the possibility that the nation will face a general war of the more traditional type." And that is the problem with which his presentation dealt.

It was a comprehensive presentation consisting of a 74-page statement and a 145-page exhibit. It set forth the PRR president's general conclusion that, in their present condition, the railroads could handle only about three-fourths of the wartime freight job they would be called upon to do.

Trillion Ton-Miles Seen

Mr. Symes estimated that the annual war load on the railroads would be almost a trillion ton-miles of freight. He said the carriers today are over 20% short of the number of freight cars and locomotives required to move that volume. He put at $5¼ billion the capital outlay required to build the car and locomotive fleet to a trillion-ton-mile capacity. And he pointed out that, from the standpoint of mobilization planning, railroad plant, equipment and manpower are steadily declining.

As to meeting wartime passenger requirements, Mr. Symes suggested that lack of prospects for a solution may explain "the apparent absence of any official planning on the subject." He added:

"Just what this country would do to move people about in the event of a future emergency is beyond my comprehension. And yet, when such an emergency occurs, there is no doubt that a very substantial number of people will have to move. If the government expects the railroads to move them as in the last war, many people would have to ride in freight cars."

The railroads were able to take on World War II's load because their plants were in good shape and they had large reserves of cars and locomotives that had been stored during the depression, Mr. Symes explained. "Today," he continued, "we would be going from boom times into war, and such surpluses do no exist."

For this hand-to-mouth railroad situation, the PRR president blamed the government's post-war emphasis on the building of "tax-free highways, airways and waterways." By contrast, he pointed out, the Russians have been expanding and developing their railroad system, both for economic and military reasons.

Building up the railroad equipment fleet is the most important immediate step which should be taken, Mr. Symes advised. As he has in other appearances before Congressional committees, he went on to urge favorable action on pending bills to carry out the "Symes plan," which calls for establishment of a federal agency to buy railroad cars and locomotives for lease to the railroads.

The freight-car fleet should be built up by the installation of 120,000 new cars a year, and that would involve an annual expenditure of about $1.4 billion, Mr. Symes said. He put the annual cost of all needed rolling stock at $1.5 billion.

This program should be got under way "without delay," Mr. Symes warned. He advocates adoption of the Symes plan because he thinks "it is self-evident that the railroad industry cannot do the job alone." The plan, he emphasized, would be purely voluntary and would not involve subsidy, since the government would get back from the railroads its investment plus interest.

Alternative proposals for building up the equipment fleet were called "impractical" by Mr. Symes. Specifically, he had in mind pending bills to give the ICC power to impose incentive or penalty per diem rates and thus use the rental charge to promote buying of freight cars.

'The Harsh Realities'

"The basic cause of the problem," he said, "is not an arbitrary lack of cooperation by certain railroads, or a selfish desire on their part to refrain from spending available funds on modernizing and increasing their equipment. The cause is much simpler—the inability of certain segments of the railroad industry to obtain sufficient funds for these purposes. No amount of penalties or so-called 'incentives' can eliminate the harsh realities of that situation and stimulate any railroad into spending money which it simply cannot obtain."

President Budd of the Great Northern supplemented several phases of the Loomis presentation, but he laid special stress on those proposals of the industry's program which call for repeal of the agricultural exemption and for user charges on publicly-provided transport facilities. Like Mr. Symes, Mr. Budd also identified the industry's "critical lack of funds" as a "fundamental cause of the present lack of capacity."

Repeal of the agricultural exemption would be an important remedial step, the GN president said. He also noted that this recommendation of the railroads suggests that rejection of the repeal proposal should, in equity, be accompanied by extension of like freedom from regulation to the same agricultural products when they move by rail.

Granger Roads Vital

Mr. Budd said this matter was very important to western granger roads. Those roads, he explained, "provide the only widespread, dependable common carrier transportation service in the vast agricultural region west of the Mississippi capable of moving the nation's crops to market in an orderly fashion and with reasonable expedition."

He went on to complain that exempt truckers, "by virtue of their favored status," have made increasing inroads in hauling agricultural commodities. He also said these truckers, who neither publish rates nor maintain regular service, have "disrupted the efficient marketing system which over the years contributed to stabilize prices to the farmer."

In supporting his call for user changes, Mr. Budd pointed out that railroads pay out about 10% of their gross revenues in taxes, and another 12% for maintenance of way and structures. Subsidized carriers, he added, pay out "considerably less" than 10% of their revenues in taxes, and have no maintenance-of-way expenses.

He urged that Congress enact legislation "implementing the principle that commercial users of government facilities pay their full fair share of the cost of constructing and maintaining the facilities they use." He also urged that, in fixing user charges, Congress should have in mind "the very limited extent to which other forms of transportation contribute to the general expenses of government, . . . the need for a strong railroad industry as a part of the national defense, and that the railroad industry will be strengthened if it is afforded equal treatment with its competitors in bearing the general tax burden of the nation and the states."

President Rice of ACL gave special attention to income-tax arrangements which the railroads seek to ease the financing of new equipment and facilities. The proposed arrangements would permit establishment of construction reserve funds, fix maximum depreciation terms at 15 years for rolling stock and 20 years for fixed property, and authorize use of the so-called reinvestment depreciation deduction. The latter is designed to insure more adequate depre-

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Chuck Bradley
Osmose Bridge Inspector

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ciation reserves by keeping them in line with inflation.

Mr. Rice also emphasized the so-called diversification proposal. That's the railroads' call for removal of restrictions which now prevent or restrict their operations in other fields of transport.

As to specific planning for mobilization, Mr. Rice said the ACL has done none because:

"We are aware of no specific federal plans for using the railroads in an emergency. Our only contact has been with local Civil Defense people in isolated instances where such local authorities have devised survival programs that call on the railroads for transportation needs. Even this contact has not produced any definite requirements or any real preparedness program. This lack of preparation is, in my opinion, a major weakness and will undoubtedly affect adversely our ability to respond to an emergency."

Along the same line, Mr. Rice also said the Department of Defense and Office of Civil and Defense Mobilization should "give serious consideration to the formulation of national emergency plans which will give the railroads some idea of what will be expected of them in an emergency." The ACL president added:

"To my knowledge, there is presently no agreement between the Department of Defense and the railroads for the use of railroad-owned equipment in the event of full-scale mobilization, although certain agreements are in effect covering the movement of cars owned by the Department of Defense. Neither is there any information available as to the level of emergency requirements for equipment or as to the extent to which the railroads may be called upon to perform transportation now moving by highway and air. Expected work-load figures should be all-inclusive, with consideration being given not only to military requirements, but to civilian economy, civilian defense needs and war-supporting industries. We need to be informed as to such matters if we are to be adequately prepared."

The hearings closed Aug. 5 with the RLEA presentation, which was made by Michael Fox, the association's vice-chairman, who is also president of the Railway Employees Department, AFL-CIO. He discussed the manpower situation, noting the downtrend in railroad employment and asserting that the railroads cannot perform their defense assignment unless they adopt the policy of maintaining during peacetime "a stabilized force which within reasonable limitations could fill the manpower requirements of a war." Mr. Fox summed up his recommendations as follows:

- The railroads should stop the abandonment of their rebuilding and repair facilities and the practice of contracting out repair and rebuilding work and should exert every effort to improve, modernize and expand such facilities to provide economical and efficient repair service on railroad properties performed by their own employees.
- Heavy repairs, rebuilding of cars and locomotives and the maintenance of tracks and structures should be programmed on an annual basis so that manpower may be conserved, employment reasonably stabilized, and equipment, tracks, and structures kept in a condition necessary to meet a war emergency.
- If existing economic conditions require tax relief or direct subsidy, it should be accorded only to those carriers which are willing to meet specified standards in connection with repair and maintenance, stabilization of railroad employment and maintenance of equipment, tracks, and structures.
- The attitude of some railroads toward the passenger business should be reversed and efforts made to attract such business—rather than to "divert" it—through improved service and aggressive efforts and experiments designed for that purpose.

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People in the News

AKRON, CANTON & YOUNGSTOWN.—Emil Tripp, general agent at Baltimore, named district traffic manager—Philadelphia.

ASSOCIATION OF AMERICAN RAILROADS.—H. Y. Turner, statistician in the Bureau of Railway Economics, retired July 31. He is succeeded by **Kenneth H. Hurdle,** formerly an assistant statistician.

ATLANTIC COAST LINE.—Lewis F. Ormond, vice president—accounts, retired Aug. 8. All employees who reported to him will report to the comptroller. **James L. Wells,** assistant freight traffic manager, retired July 23.

BALTIMORE & OHIO.—Arnath W. Knabe, assistant manager industrial development, named manager industrial development. He succeeds **Gayle W. Arnold,** retired. **Stanley A. Temple,** assistant to manager industrial development, promoted to Mr. Knabe's former position.

CANADIAN NATIONAL-GRAND TRUNK.—Charles A. Harris, assistant director of the public relations department, named acting director of public relations, effective Oct. 1, replacing **W. R. Wright,** resigned (RA, July 27, p. 72).

CANADIAN PACIFIC.—E. B. Wheeler is appointed master mechanic, Smith's Falls division at Smith's Falls, Ont., succeeding **L. L. O'Brien,** transferred.

CHICAGO & ILLINOIS MIDLAND.—W. G. Harvey, superintendent transportation and equipment, Springfield, Ill., appointed superintendent there, replacing **R. O. Janes,** who retired July 31.

CHICAGO & NORTH WESTERN.—Melvin A. Seeger appointed assistant supervisor air conditioning and heating, Chicago Shops.

CHICAGO UNION STATION.—F. E. Austerman, assistant chief engineer, appointed chief engineer, succeeding **William Landess,** retired.

DULUTH, MISSABE & IRON RANGE.—J. A. Dillan, assistant superintendent of safety and welfare, named superintendent of safety and welfare. He succeeds **Arthur V. Rohweder,** deceased.

FRISCO.—Guy S. Pollard, Jr. named safety supervisor, Tulsa, Okla.

LOUISVILLE & NASHVILLE.—John A. Parsons, traffic manager, New York, appointed to the newly created position of administrative assistant to the general traffic manager. His successor is **Wade Sellers,** division freight agent, Pensacola, Fla.

NEW HAVEN.—A. Gerdes Kuhbach has been named first vice president, in charge of the accounting, law, real estate and finance departments. He was formerly vice president—finance.

NORFOLK & WESTERN.—Howard B. Payne, general master mechanic, retired Aug. 1. **William S. Garrett,** formerly electrical engineer in the motive power department, promoted to assistant superintendent motive power—locomotive, a new position. The general master mechanic title abolished.

RICHMOND, FREDERICKSBURG & POTOMAC.—William A. Gibbs named purchasing agent to succeed **Arthur S. Wilkinson,** retired. **Charles E. Whitemore** appointed assistant manager real estate and industrial development. **George W. Guinn, Jr.,** succeeds Mr. Whitmore as assistant engineer of construction with headquarters at Richmond. **Hubert H. Jewell** named assistant supervisor of signals and communications at Potomac Yard.

SANTA FE.—Effective Sept. 1, **Raymond D. Shelton,** general manager, Los Angeles, advances to assistant vice president, Chicago. **Francis N. Stuppi,** assistant general manager, Los Angeles, named assistant to vice president, Chicago, effective Aug. 1, to replace **O. H. Osborn,** appointed general manager, Gulf Lines, Galveston, Tex., effective Sept. 1.

SOUTHERN PACIFIC.—Robert R. Robinson, superintendent, Shasta division, Dunsmuir, Cal., transferred to the San Joaquin division, Bakersfield, Cal., to replace **William H. Ferguson,** who is on the inactive list due to illness. Mr. Robinson's successor is **Samuel B. Burton,** assistant superintendent, Coast division, San Francisco, who in turn is replaced by **Preston V. Stone,** terminal superintendent, San Francisco.

Charles F. Head, commerce agent, freight traffic department, San Francisco, appointed to the newly created position of assistant general freight and passenger agent, Phoenix, Ariz.

TEXAS CITY TERMINAL.—H. M. Gresham appointed chief engineer, succeeding **H. O. Wray,** secretary and chief engineer, who retired July 1.

TEXAS & PACIFIC.—J. E. Groseclose, perishable freight agent, Los Angeles, named general agent at Phoenix, Ariz. **Ralph M. Steiner,** assistant general agent at Pittsburgh, Pa., named general agent. **O. B. Cole,** general agent at Phoenix, Ariz., becomes general freight agent at Pittsburgh, Pa.

UNION PACIFIC.—Harry G. Bartlett appointed general traffic agent at Pasadena, Calif.; **R. R. Pope** named general traffic agent at San Pedro, Calif. **Carl H. Mertens** appointed acting general advertising manager with headquarters at Omaha, Neb.

WABASH.—C. A. Muehlhauser, auditor joint facilities and contracts, named auditor—cost and research; **E. E. Braxmeier** succeeds Mr. Muehlhauser.

OBITUARY

Arthur V. Rohweder, superintendent of safety and welfare, **Duluth, Missabe & Iron Range,** died July 15.

Thomas Balmer, 71, retired vice president and western counsel, **Great Northern,** died Aug. 1 at Seattle.

Frank J. Loughlin, retired purchasing agent for the **Erie,** died Aug. 1.

Supply Trade

R. R. Rosholt has been named president of the **Northwestern Motor Company,** Eau Claire, Wis., to replace **F. W. Anderson,** retired.

Paul J. Mozola, Jr., has been named an industrial products division sales representative for the Kansas City-St. Louis territory for **Automatic Electric Sales Corp.** Mr. Mozola joined Automatic Electric in 1947.

Effective July 1, **Pullman-Standard Car Manufacturing Company** became a division of its parent company, **Pullman Inc.,** and will be known as **Pullman-Standard.**

Eugene P. Callahan, sales representative in the Cleveland district office of **The Pyle-National Co.,** has been named manager of the newly opened district sales office in the Comer Building, Birmingham, Ala.

Robert C. Geekie has been appointed southwestern representative of **Allied Steel Castings Co.**

North American Car Corp. has announced purchase of the **Interstate Tank Car Corp.,** New York. **John B. Aspegren,** president of Interstate, and **Beverly C. Barstow,** vice president and secretary, will be eastern representatives of North American. Interstate's New York office will be North American's eastern headquarters and their repair shop at Portsmouth, Va., will become the eastern repair terminal for North American.

John D. Loftis has been appointed director of marketing for the **American Car and Foundry Division, ACF Industries.** He was formerly marketing director for product projects.

R. M. Heyl has been named general manager of **Edgewater Steel Co.,** effective Aug. 1.

Sparton Corp., has created a new Railway Equipment Division. Headquarters for the new division will be at 17333 Healy Ave., Detroit. **W. E. McKittrick,** corporate vice president, will be general manager.

You Ought To Know...

The BLF&E convention ground to a halt in St. Paul last week after delegates passed a resolution calling for amalgamation of all five operating brotherhoods — including the BLE, which had strenuously resisted past merger proposals from the firemen. The BLF&E urged the five-way amalgamation to permit a "united front to prevail against the Association of American Railroads." Another factor in merger: the economics of maintaining separate organizations for the ops (RA, July 20, p. 20).

A new image for Canadian National is in the works. CNR has hired an industrial designer, James Valkus of New York, to head what it calls a "Visual Re-Design Program." The whole railroad may be in for a face-lifting, starting with the familiar maple-leaf trademark. CNR, which has spent nearly twice as much in the last 10 years on modernization as Canada has spent on the Seaway, feels that the public still thinks of it as old-fashioned, wants to change this concept.

A tour of C&NW's "Car-Fax" integrated data processing system will be a highlight of the Railway Systems & Procedures Meeting Sept. 16-17 in Chicago. The group will visit the Ravenswood headquarters and one of the 68 field stations.

Passenger business would be no problem if railroads could give all their customers such congenial company as Cary Grant and Eva Marie Saint find in each other on the "20th Century" in Alfred Hitchcock's just-released movie thriller, "North by Northwest." The New York Central's famous train plays an important, and gratifyingly authentic, role as background for the two stars.

Barge terminal facilities continue to grow. Out of 168 waterside building projects announced during the first half of 1959, 82 are new or expanded barge terminals. Braxton B. Carr, president of American Waterways Operators, Inc., says that if this rate continues, 1959 will be "by far the best year on record" for barge terminal construction.

Proposed elimination of truck-weighing stations on the New York Thruway has been protested by the New York State Association of Railroads. The association told Gov. Nelson Rockefeller that the proposal should be studied in the light of "possible adverse effect" on competing modes of transport.

First major route change since 1953 is taking place on the Alaska. The relocation—to make way for a new Air Force Ballistic Missile Early Warning Station at Clear—involves the laying of 8 miles of new mainline track and 2 miles of siding. It's due to be completed late this month.

An Ohio appeals court has upheld the Brotherhood of Railroad Trainmen's action in postponing its 1958 convention until 1962 (RA, May 11, p. 7). Previously, according to the BRT, an overwhelming majority of members voting in a referendum had approved the postponement. One reason for the decision: the high cost of holding conventions ($7,307,000 for the last three sessions).

A false advertising charge has been leveled against the Midwest Communications School of Des Moines, Iowa, by the Federal Trade Commission. FTC says the correspondence school and its agents "misinform prospective students that railroad station agents and telegraphers are in great demand by railroad companies," when the reverse is true.

Use of preservatives on cross-ties dropped sharply last year. According to a preliminary survey by the Forest Service, U. S. Department of Agriculture, about 21,326,000 cross-ties were treated in 1958, compared to 31,505,500 in 1957.

"Push-pull" suburban train operation on Chicago & North Western may begin early in October. Pullman-Standard will start delivery of C&NW's 36 new double-deck commuter coaches late this month and North Western expects to have sufficient equipment available by the end of September to launch the bi-directional operation. Delivery of the new cars will come at a rate of nine units per month. Next step: conversion of 48 existing double-deck coaches to push-pull operation as funds become available.

Railroads got a plug on TV last Wednesday night in the opening commercial on Armstrong Cork's Circle Theatre. Against a background of moving trains and track close-ups, the message told of a new Bondarc adhesive now being tested on several railroads to bond rail joints so they "last longer, cost less to maintain and provide a quieter ride." The special adhesive, developed by Armstrong, is sold through the Rail Joint Company. Three roads have made installations, the first dating from July 1957.

Sealed freight cars containing dry ice are helping thwart fruit-destroying molds that might otherwise harass California berry-shippers. The dry ice produces a simple, non-toxic gas that excludes a portion of the free oxygen in the cars, thus inhibiting the growth of the furry acid molds.

A train-off proposal of the New York Central has drawn an adverse recommendation from ICC Examiner John L. Bradford. He has made a proposed report advising the Commission to deny NYC's petition for authority to drop passenger services on its St. Lawrence Division between Syracuse, N. Y., and Massena, and between Utica and Ogdensburg. The examiner found that a "substantial number" of passengers still ride the trains, and "a considerable quantity" of mail and express is still being handled. He said NYC's evidence as to operating losses was "based largely on estimates which do not reflect true conditions surrounding the operation of the trains in question.

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With extensive experience in construction and maintenance of R. R. tracks, I. C. S. training. Desires connection with railroad, contractor, or industry. Will send resume or contact. J. E. Cox, 230 E. Monroe St., Olney, Ill.

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Baldwin Diesel Electric 120 Ton, 1000 H.P. Switcher. Rebuilt 1955, less than 2000 hrs. since rebuilt. Bargain Price. STRIEGEL SUPPLY & EQUIPMENT CORP., 307 Jack Street, Baltimore 25, Maryland. Phone ELGIN 5-7922.

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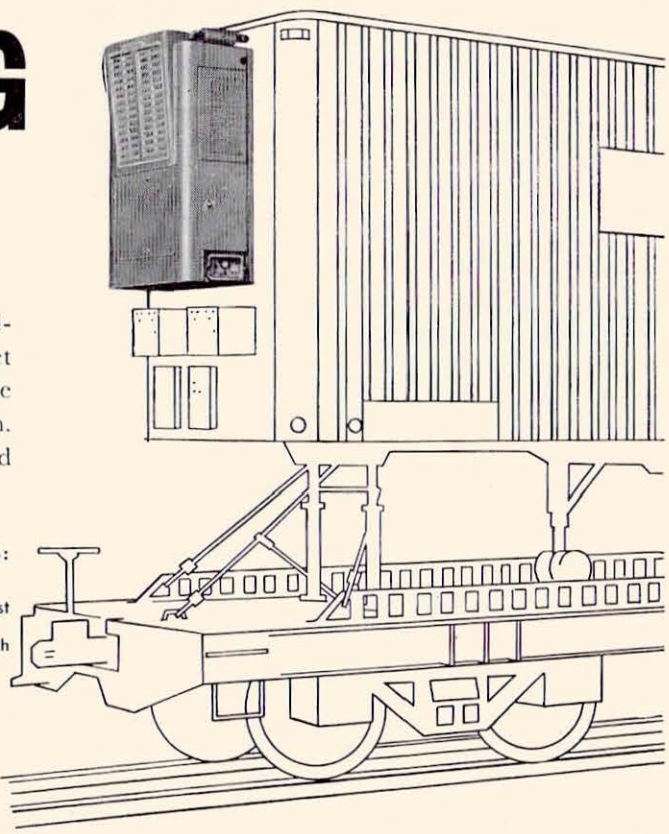
mechanical refrigeration keeps "piggy-backs" cold or warm, in any temperature range, in any size trailer, automatically, economically!

Thermo King mechanical refrigeration gives you dependable, automatic temperature control. Just set it and forget it. Its rugged, trouble-free self-contained engine is made by the world's largest maker of transport refrigeration. Thermo King units costs less to buy, less to maintain, and less to operate than any other kind of refrigeration.



NOTE THESE EXCLUSIVE THERMO KING FEATURES:

- front-mount or under-mount models
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- cools or heats at snap of a switch
- self-contained single-package construction

THERMO KING CORP.
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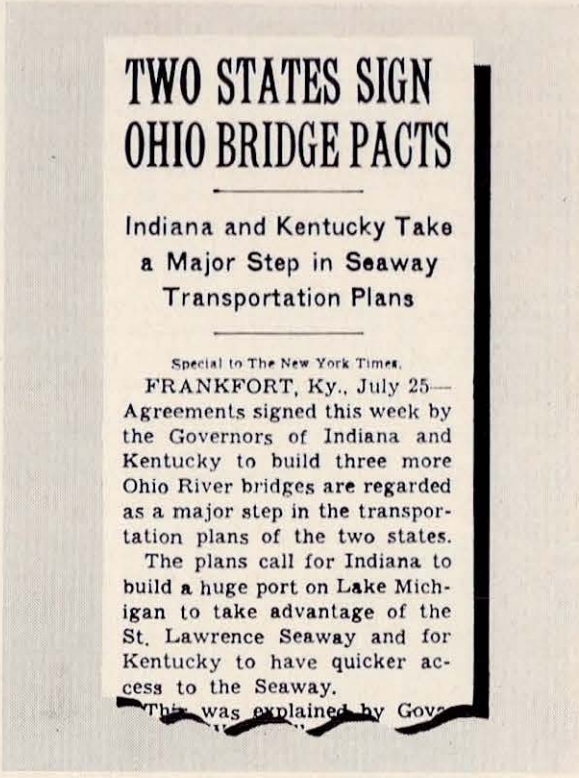
Thermo King Maintains the Only Nationwide Service and Parts Organization in the Industry

Uncle Sam Is the Real Competitor

There isn't any more important question to which the railroads need an answer than this: Do the American people want the railroads to prosper as private enterprise or not?

The reason the clipping reproduced here is important is not that it's exceptional, but that it isn't. News like this can be found in almost any newspaper, anywhere in the country, almost any day in the week—



TWO STATES SIGN OHIO BRIDGE PACTS

Indiana and Kentucky Take a Major Step in Seaway Transportation Plans

Special to The New York Times.

FRANKFORT, Ky., July 25—Agreements signed this week by the Governors of Indiana and Kentucky to build three more Ohio River bridges are regarded as a major step in the transportation plans of the two states.

The plans call for Indiana to build a huge port on Lake Michigan to take advantage of the St. Lawrence Seaway and for Kentucky to have quicker access to the Seaway.

This was explained by Gov[illegible]

Publicly owned transportation plant (highways and waterways), as it was 50 years ago, was something like public parks—an occasional public convenience, but certainly not an important factor in national economic life. Government ownership and tax support of such facilities didn't come into conflict with private enterprise, because highway and waterway plant did not then compete with any business in private ownership.

Now the situation has completely changed. Today's government-owned transportation facilities are wholly different—not just in degree, but in kind—from the rudimentary roads and snag-strewn rivers that comprised 1910's government transportation property.

Today's highways and improved rivers are used to provide vast quantities of exactly the same kind of commercial transportation that the railroads do. And cumulative government expenditures on transportation are now almost $150 billion.

The essence of state socialism is that economic facilities are government-owned—and are financed by taxation, rather than on commercial principles (everybody paying for what he gets). Transportation was not socialized in 1910 because government transportation property then had little economic significance. Transportation is predominantly socialistic today, because by far the greater proportion of the plant which provides transportation (railroads and pipelines alone excepted) is in government ownership. This plant is exempt from *ad valorem* taxes; only a fraction of the cost is covered by users' fees; and securities (where they are issued) are exempt from income taxation.

Most Americans are not, of course, consciously socialistic—socialization crept into transportation through the back door. Most people, even now, are unaware of what has happened. They look upon barges, trucks and planes as the railroads' competitors. They aren't. The real competitor of railroads is the government's transportation plant.

If the fixed plant installations that planes, trucks and barges use were privately financed—or if government simulated private enterprise in the way they finance and tax these facilities—then the railroads would have no serious problem or justifiable complaint.

It is impossible for the railroads to expect to grow and prosper normally, and to give the kind of efficient service only railroads can provide, unless they are placed on a more nearly equal basis of taxation and capital supply with their socialized competition. This equalization could come about either (1) by financing government facilities entirely through users' payments and by subjecting them to the same taxation that is levied on railroad property or (2) by socializing the railroads, wholly or in part.

There is hardly anybody who consciously favors alternative (2). But alternative (2) will come about by default unless alternative (1) is chosen and vigorously acted upon.

HOW TO SPOT A SOCIALIST: Our choice between free enterprise and socialism is determined, not by what we say, but by what we do. Anybody who isn't working for alternative (1) is a practicing socialist, whether he's conscious of it or not.

Automatic Classification Yard in action. One of the Burlington's new box cars moves down the Cicero Yard hump and through the master retarder. Okonite cables guard all signal circuits against the dangers and expenses of "chain-reaction" jam-ups caused by equipment failure.

Burlington protects its investment in automation

with reliable, service-proved Okonite cables

Ever heavier investments in electronic equipment prove that the nation's railroads are turning to automation as the answer to increasing traffic demands and spiralling costs.

Look at the Burlington's new Cicero Yard. Automatic computing and control allow it to handle 3000 cars a day . . . twice the previous total . . . at savings of 3½ hours per car. Car and lading damage have been curtailed by 85%. Realizing that "automation is no better than the circuits that serve it", Burlington's Chief Signal Engineer, A. L. Essman, installed Okonite cables for all power, switch, retarder and interlocking circuits in the yard.

Like the Burlington, Class I railroads throughout the country have seen Okonite cables prove their reliability in service along their own lines. And, like the Burlington, too, they are insuring maximum reliability for their automated systems by specifying Okonite for the vital circuits that serve them.

There are four basic reasons why Okonite cables offer this service-proved reliability.

1. **Engineering experience,** built on cooperation with railroad engineers, assures cable constructions designed to give longer life in each specific application.
2. **Quality materials** purchased under Research-developed specifications are used in service-proved formulas and operations to assure a uniform, premium product.
3. **Manufacturing skill** in all known insulating methods, developed over 80 years, combines with the most modern equipment and controls to give the **right** cable for your circuit.
4. **Quality control and testing** programs that lead the industry add positive proof that you receive the **full value** of the Okonite cable designed for your operation.

For detailed information, technical data and dimensions on all types of Okonite railroad cables write for Bulletin RA-1078.

THE OKONITE COMPANY
Subsidiary of Kennecott Copper Corporation
Passaic, New Jersey

***where there's electrical power . . . there's* OKONITE CABLE**

6481

CONSOLIDATING 7 LOCATIONS EXTENDING cTc

Annual savings total $109,666

In 1954, the Delaware and Hudson retired a mechanical interlocker at SX Tower, Hudson, Pennsylvania. A modern, all-relay electric interlocking replaced the obsolete plant.

Next, in orderly, planned sequence, controls for other locations were brought into the Hudson control office, with centralized traffic control replacing timetable and train order operation. Now, panels for Carbondale and for Miners Mills, Plains Jct., and Plymouth are nearly ready for installation. Savings on these—and on older additions—have been calculated. The results are an impressive tribute, not only to the well known economies of cTc, but to the farsighted planning of the D&H.

$34,750 ANNUAL SAVING
$31,433 SALVAGE

Coded control from Hudson, now being installed, will eliminate hand switching and delays at Carbondale. With cTc operation between Carbondale and WC Cabin (WC is controlled from Oneonta) 7837 feet of unneeded siding and yard track are going out of service.

$20,798 ANNUAL SAVING
$75,865 SALVAGE

cTc operation between Scranton and Minooka Jct. eliminated need for replacing several miles of flood damaged trackage. In addition, two open offices were retired (one, an office on a neighboring road, is not included in these savings).

INTERLOCKING EXPANDED TO cTc OFFICE

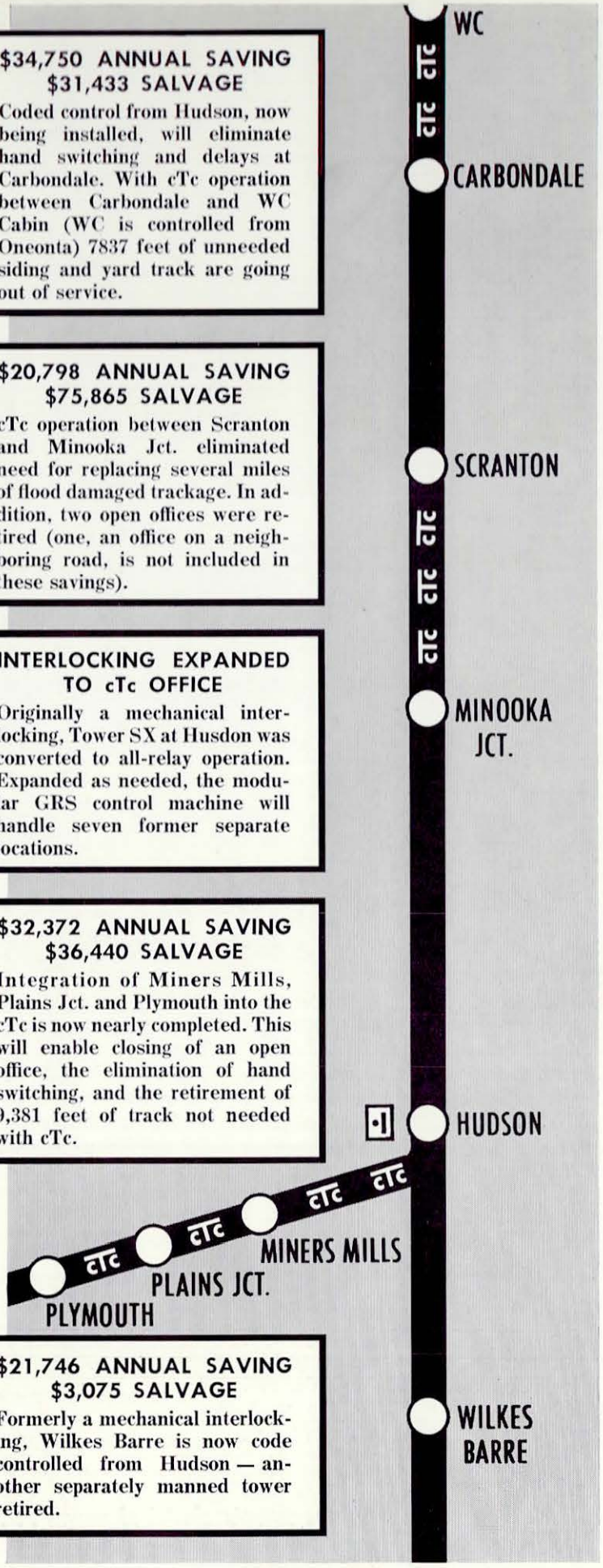
Originally a mechanical interlocking, Tower SX at Husdon was converted to all-relay operation. Expanded as needed, the modular GRS control machine will handle seven former separate locations.

$32,372 ANNUAL SAVING
$36,440 SALVAGE

Integration of Miners Mills, Plains Jct. and Plymouth into the cTc is now nearly completed. This will enable closing of an open office, the elimination of hand switching, and the retirement of 9,381 feet of track not needed with cTc.

$21,746 ANNUAL SAVING
$3,075 SALVAGE

Formerly a mechanical interlocking, Wilkes Barre is now code controlled from Hudson — another separately manned tower retired.



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